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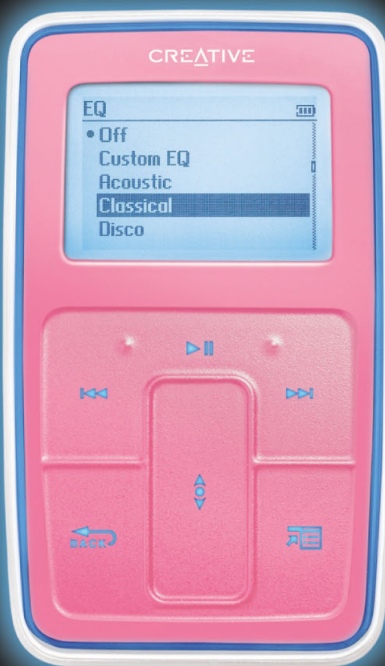
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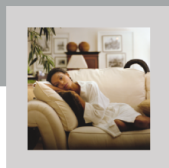


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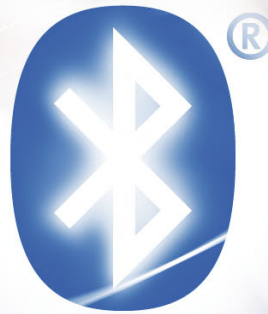
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COVER STORY



If you've purchased a PDA or smartphone recently, there's a pretty good chance it came with a short-range wireless capability called Bluetooth. Unfortunately most buyers aren't aware of the full range of Bluetooth's benefits. In this month's cover story articles we explain what Bluetooth is and how to use it and showcase some of the latest Bluetooth products.

- 40 Bluetooth**
You Have It; Now What?
- 44 Bluetooth Boot Camp**
Cable Replacement
Technology Explained
- 46 Internet Access
With Bluetooth**
Connect To The Web
- 48 Communicate
With Bluetooth**
How To Email
- 50 What's Next?**
Things You Can Do With
Bluetooth
- 52 Everything's Coming
Up Bluetooth**
Stuff You Can Buy

Buzz

- 8 Mobile News**
- 10 Web News**
- 12 Travel News**

On The Road

- 15 Travel Insurance**
Decide What's Right For You
- 17 Books & Wi-Fi**
Surf Into Barnes & Noble
- 22 WebDestinations**
Travel-Booking Sites

- 24 WebEx**
Hold A Meeting Anywhere
- 26 International Traveler**
Do You Know Your
Jacks, Plugs & Adapters?
- 28 One For The Road**
Business Travel Accessories



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Office Space

- 30 **Scot's Take**
Looking Into Longhorn
- 32 **Microsoft Excel 2003**
Chart Your Information
- 34 **Microsoft Outlook 2003**
Use Desktop Alerts
- 36 **Microsoft FrontPage 2003**
Creating Image Maps & Hotspots
- 37 **Adobe Acrobat 6.0 Professional**
Adding Watermarks & Background Images
- 38 **Adobe Photoshop CS**
Be A Masking Marvel
- 39 **Intuit QuickBooks Pro 2005**
Create & Print Customized Budget Reports

PC Today.com

- 56 **PC Today Online**
Get Round-The-Clock Help At PCToday.com

Undocked

- 58 **Windows Mobile Tips**
- 60 **Palm OS Tips**
- 62 **Handheld Tips**
- 64 **PDAs & Company Policy**
Guidelines For Using Your Handheld At The Office
- 66 **Portable Gear**
Accessories That Go Anywhere
- 68 **PDA Software**
PhatWare PhatPad 2.1
Agendus Professional Edition 9
- 69 **Revving Up A REV**
Up To 90GB Per Cartridge & Faster Than A Speeding DVD



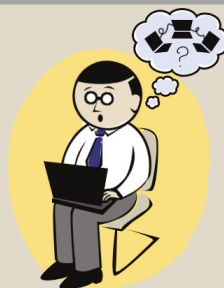
Roaming

- 70 **The Hot Spot**
Your Guide To Wi-Fi
- 72 **Stay Connected**
Yahoo! Mobile
- 74 **Surfing The Third Rail**
Power Lines: The Next Broadband Choice?
- 76 **The Sky's No Limit**
In-Flight Mobile Phone & Internet Access
- 78 **Hotspot Sniffers**
Tried & Tested Wi-Fi Finders
- 80 **Cell Phone Antivirus Protection**
Is It Necessary?

Home Base

- 82 **Choose A Second Computer**
Get The Most PC Out Of Any Budget
- 86 **Got Prints?**
Put Your Digital Images To Good Use, Finally
- 88 **The Well-Tuned PC**
When Wireless Won't Work
- 90 **The Latest Software**
- 92 **Play Hard**
A Look At What's New In PC Gaming

Survival Guide



Business Travel 911

- 96 Network Connection Problems
- 98 Lost Wallet Or Purse
- 100 Identity Theft
- 102 Can't Open A PDF File
- 104 Can't Open A PowerPoint File
- 106 Network-Projector Setup Problems
- 108 Mishandled Luggage

EDITOR'S NOTE

I encountered something incredible this morning when I took my biannual trip to the dentist. My dentist has a rather small suite of offices tucked in the corner of a professional building here in Lincoln, Neb. She uses all the latest dental equipment, X-ray machines, and scanners, but for as long as I've known her, my dentist has resisted moving from paper files to computer files.

Too expensive, too time-consuming, and too much clutter: Those were her reasons for sticking with what had always worked, and who could blame her? If it ain't broke, why fix it?

Today, however, there was something new in the office: a notebook PC, complete with Windows XP Professional and a wireless connection, in every exam room. My dentist explained that she had finally found, in the portability of notebooks, the ease of today's wireless networking capabilities, and the relatively low price of outfitting the entire office in one fell swoop, a computing arrangement she could live with.

Wireless Revolution

This is just one of countless stories that bring home the global shift to all things wireless. And by "global" I mean both that it's a worldwide movement, and that it's affecting virtually everybody, even those who have been least likely to jump on any kind of technology bandwagon.

In the spirit of this booming interest in mobile and wireless technology, I'm proud to introduce *PC Today: Reloaded* magazine. Well, OK, we really didn't rename the magazine. (But you must admit that's kind of catchy, eh?) We have, however, undertaken a relaunch of sorts. Although we still offer some excellent desktop computing advice in our Office Space and Home Base departments, the rest of *PC Today* has gone mobile.

What's In Store

I've been listening to you (our readers) and understand that you're sometimes overwhelmed by the mix of too much information and not enough time to decipher it all. Believe me, I understand. That's why it's our goal to deliver a magazine that helps you learn what you need to know to stay one step ahead of the other guy (that is, the person who's *not* reading *PC Today* magazine ;-)) in all of your endeavors, whether you're in the office, on the road, or kicking back at home.

In this and future issues you'll receive must-have information about the devices you use, jargon-free tours of current technologies and ones to watch for, and business travel advice that's both practical and entertaining.

If you see something you like or dislike, or if you have suggestions about how we can make *PC Today* more helpful for you, please let me know by emailing editor@pctoday.com.

Until next month,



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Mobile News

Windows Mobile 2005 By The Numbers

Some interesting facts compiled by the Windows Mobile 2005 software development team might surprise you—especially if you believe them. For example, the team claims that during the development process, 77 buckets of golf balls were hit to relieve tension, 5 boxes of Band-Aids were used for thumb blisters by manual device testers, and 124 bottles of Pepto-Bismol were consumed. See the accompanying graph for additional trivia.

47 One-pound bags of peanut butter M&Ms dispensed

37 Cell phones harmed during the project

15 Average number of pounds gained per team member due to missed workouts

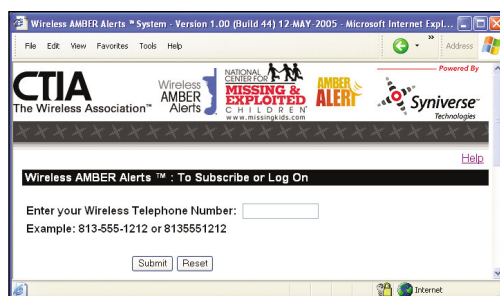
3.2 Average number of fast-food dinners ingested per team member per week

1 Terabyte of build data generated each day

SOURCE: BEHIND THE SCENES WITH THE DEVELOPMENT OF WINDOWS MOBILE 5.0, MICROSOFT (DOWNLOAD .MICROSOFT.COM/DOWNLOAD/8/3/E/83E64ACE-A0F7-481B-8097499ED8CE2655/WINDOWS_MOBILE_5_FUN_FACTS.PDF).*

BlackBerry Subscribers Exceed 3 Million

RIM (Research In Motion), developer of BlackBerry wireless devices and the BlackBerry communications platform, announced that its subscriber base now exceeds 3 million, up from 2 million in November 2004. According to Jim Balsillie, Chairman and Co-CEO of RIM, the company is currently scaling operations for the 5 million and 10 million subscriber milestones. BlackBerry technology is a combination of wireless devices and communication solutions that provide access to email, phone, text messaging, Internet, and intranet-based applications.



Wireless AMBER Alerts

The National Center for Missing & Exploited Children has partnered with the wireless industry to offer AMBER Alerts for text-enabled wireless devices. Subscribers whose wireless provider participates in the program can opt in to receive the alerts by registering at

www.wirelessameralerts.org. During the subscription process, the service verifies your provider's participation, and you can specify as many as five ZIP codes from which to receive text message alerts about missing children. Instructions for reporting any information related to the alert is included in the text message.

Handheld Vendors Offer Windows Mobile 2005 Upgrade

Microsoft's most recent version of the Windows Mobile 2005 portable platform features numerous enhancements to software and device functionality. To take advantage of these new features, handheld device makers such as HP and Dell plan to make an upgrade available for certain existing models. New features in Windows Mobile 2005 include the addition of PowerPoint Mobile, revamped Office applications, support for extended storage on hard drives and USB drives, and persistent memory storage that retains information even when the handheld's battery is depleted.





Most Households Have A Mobile Phone

According to a survey of 5,600 U.S. households, Forrester Research reports that 67% have at least one mobile phone. Other survey results found that less than 10% of the respondents rated a camera as an important phone feature and 20% said that wireless data capability is important. In addition, prepaid plan use has more than doubled in the past two years, and the age group most likely to have a mobile phone is the 18- to 24-year-old category.

Siemens Improves GPS For Mobile Phones

Most GPSes (global positioning systems) rely on direct line-of-sight contact with at least three satellites. Establishing your initial position can take several minutes, and the signal degrades in cloudy weather or when physical obstacles such as tall buildings exist. New IP- (Internet Protocol) based A-GPS (Assisted-GPS), piloted by Siemens, improves on traditional GPS technology by integrating the mobile phone network to provide additional data to the phone. This allows the A-GPS system to analyze weaker signals and transmit satellite data in less time. A-GPS technology is expected to be available to consumers later this year.



Protect Your Bluetooth Devices

Bluetooth is a short-range (about 30 feet) wireless solution for connecting mobile devices, computers, and peripherals. You can think of it as a wireless USB cable for linking things like wireless headsets, printers, keyboards, and other electronic gadgetry. For more on Bluetooth, check out the Bluetooth Cover Story section that begins on page 40.

If you use Bluetooth devices or plan to do so, here are some tips for protecting and securing your device that we compiled from the Bluetooth SIG (Special Interest Group) Web site (www.bluetooth.com):

Don't accept files transmitted to your device from unknown or suspicious entities and don't download or install unknown or suspicious software.

When you don't need to connect to other devices, put your Bluetooth device into a nondiscoverable state, which makes it invisible to hackers using Bluetooth devices nearby. See your product documentation for detailed instructions.

Check for and install vendor updates for your mobile Bluetooth device.

If you lose a Bluetooth device or it is stolen, unpair it from your other devices so that it no longer has access to those devices. Refer to your product documentation for details about pairing and unpairing Bluetooth devices.

Do not pair your Bluetooth device with unknown devices.

Create a PIN of at least 8 digits when establishing pairing with a known device. In addition, attempt to pair devices in nonpublic areas where hackers are less likely to intercept communications. ■

Web News

Internet Is Winning Over TV

People are surfing the Web more and reading newspapers or magazines and watching television less. A recent BURST! Media survey revealed a sharp increase in Internet usage compared to the stable or decreased use of other media.

Media Consumption Among U.S. Internet Users, April 2005 vs. April 2004 (as a % of respondents)

Spend More Time

Spend Same Amount Of Time

Spend Less Time

Internet:

60.9%

26.9%

9%



Radio:

27.8%

40%

27.1%



Television:

24.5%

36.5%

35.5%



Newspapers:

24.1%

39.4%

30.3%



Magazines:

21.3%

38.8%

34.1%



SOURCE: BURST! MEDIA, MAY 2005



Team 99 Taking Longhorn To Its Launch

When Microsoft releases the final version of Longhorn late next year, it will have gone through some rigorous testing by Microsoft employees and the members of Team 99, a group of 20 or so bloggers chosen to create a buzz about Microsoft's newest software.

Robert Scoble, a Microsoft employee and Longhorn evangelist, announced the resurrection of Team 99 in May. The bloggers were given access to Longhorn in return for signing nondisclosure agreements. Team 99 is responsible for working through the program and, according to Scoble, "telling us where we're screwing up and what we are doing well."

How did Team 99 come about? Scoble announced in a blog he posted in May that he was searching for bloggers to get the word out about Longhorn. In his words, he explained Longhorn got its name from the bar that is between Whistler and Blackcomb in British Columbia. The 99 comes from the road you drive from Scoble's house to get up to the Longhorn bar. "So, Team 99 is the team that'll take us to Longhorn's launch," he wrote.



Google Acquires Social Networking Service

Google has added on to its mobile and social-networking technologies with its purchase of dodgeball.com. Dennis Crowley and Alex Rainert, dodgeball.com founders, posted on their Web site that they have taken the service about as far as two men can. In order to better the service, they talked to angel investors and venture capitalists in search for a way to make improvements. It wasn't until they met with Google reps that things clicked. "The people at Google think like us," Crowley and Rainert wrote in their post.

Now that Google has dodgeball.com, Crowley and Rainert will have more resources available to them, as well as more time to building new features.

The dodgeball service works like this: Subscribers notify dodgeball.com where they are and dodgeball.com in turn notifies all of their friends (those on their contact lists and who are located within 10 blocks of the location) where they are so everyone can hookup.



Try Out AIM Mail In Beta

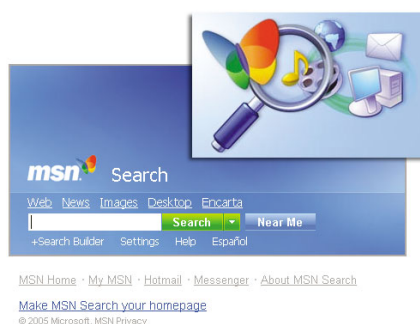
America Online has finally tossed its hat into the ring with all the other Web-based email providers with its AIM Mail Beta (beta.aol.com/projects/aimmail). The free Web-based email service is tied to AOL's IM (instant messaging) service and is available to all current AIM users, as well as all Internet users.

With the beta version you get spam and email virus protection, as well as 2GB of online email storage. AOL's offering is part of its plan to overhaul its business model to focus on freely available services and programming.

Other features available with AIM Mail include the ability to "unsend" or cancel a message under certain circumstances, a built-in spell checker, and an Address Book indicator that lets you know if contacts are online.

Microsoft Finalizes MSN Search Toolbar

Late spring saw the launch of the final version of the MSN Search Toolbar. The long-anticipated software incorporates the Windows Desktop Search technology, enabling users to search their PCs and the Web via Windows and Internet Explorer, Outlook, and their own desktops. The software enables users to preview search results, such as Outlook emails or Word documents, and offers several filters and sorting options for narrowing results. To enhance the Web browsing experience, the MSN Search Toolbar provides a pop-up blocker, an automatic form fill function, and access to MSN Services. MSN Search Toolbar is currently only available in U.S. English, and requires Windows XP/Server 2000/2003 and Internet Explorer 5.01 or later. Download it for free at desktop.msn.com.



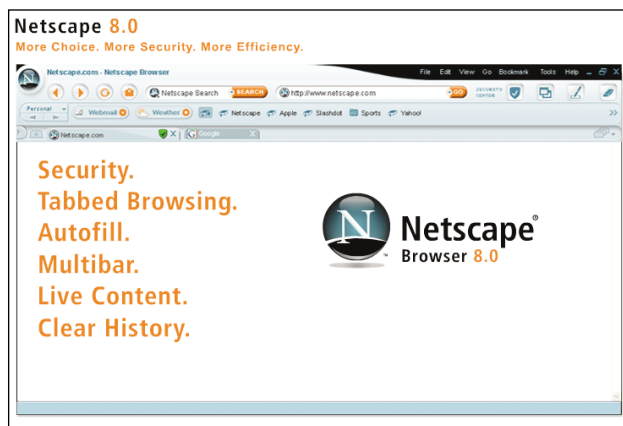
Phishers Learning New Tricks Of The Trade

According to a recent study, Websense Security Labs revealed a disturbing rise in the use of keystroke loggers or keyloggers. Keyloggers are programs that infect a computer, record the user's keystrokes (including significant personal information such as usernames and passwords for online banking sites), and send them back to the attacker. Websense's study revealed that an average of 10 new keylogger variants and more than 100 Web sites designed to infect computers surfaced each week in February and March. Other frequently-used phishing tactics include instant messaging, email, and the use of counterfeit Web sites mimicking popular services such as PayPal. To report phishing activity, go to the Anti-Phishing Working Group Web site (www.antiphishing.org).



Netscape 8 Off To A Rocky Start

Despite the decline of its popularity of the past few years, Netscape is staying in the fight with the release of version 8 (available for free download at browser.netscape.com/ns8). New features include tabbed browsing (a feature made popular by Mozilla Firefox), site controls, live content, and single-click access to 10 customizable toolbars. Although touted as capable of seamlessly switching between the rendering engines for the popular Firefox and Internet Explorer browsers, rumors of bugs in Netscape 8 soon began to circulate throughout the Web. As of press time, Netscape was working to overcome a bug that reportedly disables Internet Explorer's XML rendering capabilities.



Yahoo! For Music

After a lengthy period of anticipation, Yahoo! announced the availability of its new music store, an addition to the Yahoo! Music service. For \$4.99 per month (\$59.88 billed yearly) music enthusiasts get full access to Yahoo! Music Unlimited, which includes:

- Access to over 1 million songs
- Premium access to Yahoo!'s popular LAUNCHcast radio service
- Permanent song downloads for 79 cents per song
- More than 120 exclusive programmed radio stations
- The capability to create playlists with subscription music

Users can also transfer subscription songs to compatible portable devices and share songs via Yahoo! Messenger, as well as burn and rip CDs with the Yahoo! Music Engine. Yahoo! Music Engine is also available to nonsubscribers, who, although unable to access the aforementioned features, can purchase permanent downloads for 99 cents per song, burn and rip CDs, and listen to more than 35 exclusive radio stations. Check it out at music.yahoo.com.



Travel News

Business Travel Expected To Rise

A recent survey conducted by Yesawich, Pepperdine, Brown & Russell (www.ypbr.com) revealed an expectation for increased business travel in the coming year. Of the active 1,200 business travelers surveyed, 42% expect to take more trips in the year ahead while 24% expected to make fewer trips. On a different note, the top travel challenge reported is not enough sleep, and ample legroom is the most desired amenity for frequent airline travelers participating in the survey.

Top Travel Challenges

41%	Not enough sleep
35%	Eat too much
23%	Stress
18%	Loneliness

Preferred Amenities For Frequent Flyers

88%	Ample legroom
63%	Overhead/onboard storage for full-fare customers
36%	In-flight Internet access
23%	In-flight cell phone usage

SOURCE: YESAWICH, PEPPERDINE, BROWN & RUSSELL 2005 NATIONAL BUSINESS TRAVEL MONITOR SURVEY OF 1,200 BUSINESS TRAVELERS.

New Border Crossing Requirements

Travelers to and from the Caribbean, Bermuda, Central and South America, Mexico, and Canada will be subject to new documentation requirements when entering the United States. The new U.S. requirement, known as the Western Hemisphere Travel Initiative, states that to re-enter the United States, travelers must present a passport or other (yet to be finalized) documentation. The initiative will be implemented in stages. Documentation for air/sea travel to or from the Caribbean, Bermuda, and Central and South America is effective Dec. 31, 2005. Requirements for air/sea travel for Mexico and Canada are set to begin Dec. 31, 2006, and land border crossings will be added for all locations on Dec. 31, 2007.



Online Concierge

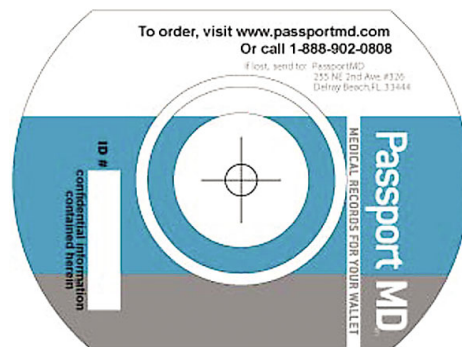
If you love staying in New York City hotels and want that same feeling at home, check out the New York First Company's online department store. Here you'll find cozy robes, pillows, and towels, not to mention a housekeeping cart and bathroom hardware. The products come from the same vendors used by well-known New

York City hotels such as the Plaza and the Waldorf-Astoria. To take a look, go to www.newyorkfirst.com and select the Concierge department.

Pocket Doctor Data

A Florida doctor has developed PassportMD, a service that stores your medical and personal data on a business-card size CD. The 45MB disc stores information in a format that doctors can read on any Windows PC. "All too often when an emergency occurs to a traveler abroad, precious time is wasted as the medical professional tries to learn about the patient's medical history," says Steven Hacker, M.D., the physician who created PassportMD.

The service costs \$64.95 per year and includes two copies of the CD and semiannual updates. For more information, see the PassportMD Web site (www.passportmd.com).





Ritz-Carlton Adds Two Beijing Locations

In 2006, the Ritz-Carlton Hotel Company plans to open two new locations in Beijing, China. The Ritz-Carlton Beijing, Finance Street is being built at the intersection of Taipingqiao Street and Jinchengfangdong, and the Ritz-Carlton Beijing will be located in the commercial district along Changan Avenue. The hotels will open for business prior to the 2008 Summer Olympics to be held in China's capital city. Other hoteliers such as the Westin are also building in Beijing in anticipation of high demand during the 2008 Olympics.

Traffic.com Offers MyTraffic Feature

Traffic.com (www.traffic.com), an online road traffic monitoring service, is now offering a new MyTraffic feature for select cities across the United States. The service lets you define and save your usual traffic routes. It then uses the route information to send traffic alerts and updates to you via email or a wireless device. You can also use the real-time traffic-mapping feature on the service's Web site to learn about traffic conditions before you venture out.



Cosmopolitan In Vegas

The \$1.5 billion Cosmopolitan Resort & Casino is being built on previously undeveloped land at the center of the Las Vegas strip (next door to Bellagio). The Cosmopolitan is a boutique, mixed-use luxury resort featuring condominiums, hotel rooms, a casino, retail, dining, entertainment, meeting rooms, and the

Cosmo Beach Club. It will consist of two, 61-story glass towers on its eight-acre site and is expected to house more than 2,000 hotel and condominium units. The Cosmopolitan's developers plan to open the resort in late 2007 or early 2008.

Secure Your Checked Luggage

If you want to secure your bags without worrying that airport screeners will cut the locks, look for locks certified by Travel Sentry. An industry-standard for airline luggage locks, the TSA (Transportation Security Administration) accepts Travel Sentry devices. If TSA screeners select your bag for hand screening, they can use special codes and tools to open the locks without damaging them. If you use a Travel Sentry lock and it is damaged during the inspection process, some manufacturers will replace the lock.

The locks come in a variety of styles, including combination locks, keyed locks, and even integrated locks that are built into luggage by manufacturers such as Samsonite and Atlantic. For more information and a list of retailers, visit Travel Sentry's Web site (www.travel-sentry.org).

Helpful hint. If TSA screeners inspect your checked-in luggage, they will place a notification form in your bag. If you suspect someone has opened or inspected your baggage, check it at your earliest convenience to ensure nothing is damaged or missing. Report any problems to your airline immediately. If you report by phone, note the date and time of the call and with whom you spoke. ■





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Travel Insurance

Decide What's Right For You



When a series of unexpected events caused Luther and Nora Krank to skip their Caribbean cruise, the couple was faced with more bad luck. They hadn't purchased travel insurance, so they couldn't get a refund on their package.

Fortunately, these fictional characters in John Grisham's "Skipping Christmas" passed along their tickets to neighbors who needed the trip more than they did. Apparently, the Kranks' generosity didn't hurt them financially.

But most of us are not in such a luxurious position. Canceling a prepaid trip, no matter the reason, wouldn't leave us shrugging our shoulders and waiting for the next cruise ship to dock. We'd want our money back.

That's where a good travel insurance policy comes in. Susie Dinkelman, a senior travel counselor with AAA in Lincoln, Neb., says that her company

advises travelers to purchase a travel insurance policy every time they book a package. AAA doesn't draw a distinction between domestic and international travel in this regard, even though trips to foreign countries can present greater obstacles should difficulties arise. Unless your financial situation is such that you can afford the loss of a costly vacation package, Dinkelman says you should purchase a comprehensive policy that covers things such as trip cancellation, interruption, delays, lost luggage, and emergency medical care.

Essential Policies

If you never purchased a travel insurance policy before, you may not be aware of how many types of policies are avail-

able. You can purchase a comprehensive plan that covers most of the areas mentioned above, or you can pick and choose portions that best supplement your current coverage and potential needs.

A comprehensive package will cost significantly more than a single policy, but it's still affordable. For instance, suppose you booked a \$4,000 Alaskan cruise package. If you go to the CSA Travel Protection Web site (www.csatravelprotection.com) and enter the cost of the package, trip type (cruise), dates of departure and return (nine days in June), and age of traveler(s), you get a quote immediately. We entered this information and the site quoted us a policy carrying a premium of \$93.29, which covers the following areas of potential risk:

Trip cancellation. Illnesses, accidents, death of a loved one—just a few reasons you may need to cancel a trip. CSA would reimburse you all \$4,000 for the lost trip.

Trip interruption. You'd receive up to \$6,000 if something disrupted your vacation and you returned home prematurely.

Trip delay. Inclement weather can cause a flight delay, which in turn can cause you to miss a connecting flight or the start of your cruise. Our sample policy would pay up to \$1,000 to cover the costs of accommodations while you waited for transportation to your destination.

Missing luggage. You could receive \$200 if your luggage was delayed in getting to you and as much as \$1,000 if it didn't turn up at all.

Medical evacuation. Protecting yourself in case you need emergency transportation due to an accident or medical condition is necessary for all travelers, but more so for people traveling overseas. You can purchase this separately from some insurers, as part of medical coverage, or as part of a comprehensive plan. Our sample CSA policy would pay up to \$250,000 should you need emergency medical transportation to a local hospital or one near your home.

Health/medical. It is imperative that you read your medical and dental

HTH Travel Insurance				
Travel Alerts Healthy Travel Contact Us Home				
Quote and Buy Products Global Health and Safety				
Returning Customers >>				
Quote Results				
Full Quote				
Travel Medical Policies				
	Medical Limit	Trip Cancellation	Quote	
TravelGap Vacationer	\$75,000	n/a	\$10.32	View Benefits Buy Online
	\$1,000,000	n/a	\$13.52	View Benefits Buy Online
A range of options is shown - View All Options				
TravelGap Multi-Trip Gold	\$250,000	n/a	\$159.00	View Benefits Buy Online
TravelGap Multi-Trip Silver	\$50,000	n/a	\$89.00	View Benefits Buy Online
Notes: *Covers all domestic and international trips (up to 70 days duration per trip) in a 12 month period. **To be eligible for TravelGap Multi-Trip, you must currently be enrolled in a Primary Health Plan.				
Compare TravelGap Plans				

HTH Travel Insurance offers comprehensive medical plans for single trips and all trips taken within a year's time.

Travel Insurance Online

A good place to start looking online for travel insurance policies is a site that lets you compare packages from numerous insurers. You input some details of your trip, such as date of departure, cost of the trip, destination, type of travel, and your age, and the site will display quotes for plans from several insurers. Comparative sites worth your attention include:

InsureMyTrip.com

www.insuremytrip.com

This site makes it easy to search for comprehensive coverage or individual policies from more than a dozen insurers worldwide.

squaremouth.com travel insurance (formerly quotetravelinsurance.com)

www.quotetravelinsurance.com

Search more than 100 policies from some of the top insurers in the country.

TripInsuranceStore.com

www.tripinsurancestore.com

Search with confidence at a site that offers policies from only five insurers, which it deems the best of the best.

The following companies are just some of the online insurers that have earned solid reputations among their customers:

Access America

www.accessamerica.com

CSA Travel Protection

www.csatravelprotection.com

HTH Worldwide Travel Insurance

www.hthtravelinsurance.com

Travelex Insurance Services

www.travelex-insurance.com

TravelSafe Insurance

www.travelsafe.com



TripInsuranceStore.com is unique because it lets you search for travel policies from a select group of insurers.

insurance policies thoroughly or call your insurer to see what limits the company places on your coverage. For example, Medicare won't pay for medical costs incurred outside the United States and its territories (with some exceptions if you travel to Mexico or Canada).

The CSA policy would pay up to \$50,000 for medical or dental expenses. However, depending on your travel plans and medical needs, you may opt

to purchase medical insurance that has more comprehensive coverage. The TravelGap Vacationer policy from HTH Travel Insurance (www.hthtravelinsurance.com) is a good example of this. You can choose several levels of maximum benefits, from \$75,000 to \$1 million, with varying deductibles. Benefits include 100% coverage of surgery, anesthesia, diagnostic X-rays, office visits, and ambulance service (up to \$1,000). It also

Buyer Beware

includes some dental coverage, medical evacuation (up to \$500,000), and the cost for the price of an economy round-trip airfare ticket (up to \$1,500) for someone to travel to the hospital to which you might be taken.

coverage you don't need or that isn't right for your situation.

Dinkelman cites the example of cruise lines that sell insurance policies. Let's say you book a seven-day Princess cruise. That cruise line offers two types of insurance packages for its passengers, according to Dinkelman. Should you need to cancel the trip at the last minute, one package will only give you credit with the cruise line, not a cash refund. Such a package wouldn't meet the financial needs of many travelers. Therefore, Dinkelman cautions against buying policies from the carriers that transport you to and from your destination.

Another thing to consider is whether or not you can cancel your insurance policy. If in the rare instance you change your mind about purchasing insurance, will the company let you cancel the policy and issue you a refund? Expect some qualifiers; for example, you may not get a refund after a certain number of days have passed since buying the policy. Access America (www.accessamerica.com) is one insurer that will issue a refund if you cancel the policy within 10 days of purchasing it, provided, of course, that you haven't begun your trip or filed a claim.

Finally, consider the reputation and financial stability of the companies making your trip possible, from the airline flying you to your destination to the resort where you'll be staying. "Bankruptcy has become a big issue since 9/11," Dinkelman says, referring to the terrorist attacks against the United States in 2001. Reductions in the numbers of flights and customers have left airlines and other travel-related businesses in the red or pushed them out of business completely.

If you purchase a comprehensive plan, you may want to include a policy that will protect you in case a company goes belly up between the time you buy your travel package and the time you return home. The insurer may not have a policy explicitly for bankruptcy because that's often covered under trip cancellation or interruption policies. Either way, make sure you're protected. ■

by Rachel Derowitsch

Books & Wi-Fi

Surf Into Barnes & Noble

Your local Barnes & Noble bookstore has mind-boggling amounts of information in the hardbound and paperback books that line its aisles. Now the popular stores are offering even more information and entertainment, this time via wireless high-speed Internet access points.

Barnes & Noble operates nearly 900 bookstores in the United States and more than 600 of those stores have wireless Internet access. To take advantage of the high-speed Internet hotspots at these stores, all you need is your notebook PC, a wireless Internet adapter, and an account that lets you pay for the time you spend online.

Prologue

In the stores that do have Internet access, you'll find connection speeds that are anywhere from 50 to 100 times faster than the thumb-twiddling dial-up access you're still fighting with at home. What's more, in most cases you won't have to hang out in just one area because the access signal should reach most parts of the store. The access works thanks to Barnes & Noble's partnership with SBC, a company that's setting up Internet hotspots all over the country; SBC has more than 5,000 FreedomLink hotspots already in place, including its bookstore access points.

Most, but not all, Barnes & Noble stores now have wireless access points, but it's a drag to haul your PC gear all the way there only to find out that your store is still disconnected. To avoid this kind of disappointment you can simply check the SBC site (www.sbc.com/freedomlink) to locate stores that are online. Click the Hot Spots link and enter the state and city where you want to search for access points. Be advised that if you enter a ZIP code, you'll see only the



hotspots in that specific ZIP code area and not those spots that might appear elsewhere in the same city.

It's also disappointing to arrive at your Barnes & Noble, only to find that the Wi-Fi hotspot won't work with your operating system. Windows NT is the only major OS that's not supported by FreedomLink, so if you're a WinNT user you'll have to find access elsewhere.



This is the site you'll see after you connect to FreedomLink and start your Web browser. Here you can choose a payment option, starting as low as \$4 for a two-hour session.

The Plot Thickens

The process for connecting to a Barnes & Noble hotspot is straightforward, and provided you have a working wireless adapter and valid credit card, you'll be up and running in just a few minutes. You don't need to visit the bookstore's customer service desk or checkout line in order to get started. Instead, head for a comfortable spot where you can settle in for the duration of your visit.

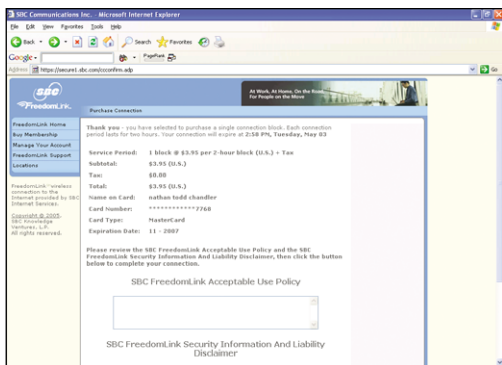
Start your computer and wait for it to finish loading all of your startup programs. Most wireless adapters load an icon into the System Tray, which is the area next to the clock on the Windows taskbar. If you aren't sure which icon is which, Windows should offer a description of each icon as you hover the mouse pointer over an icon. Once you find the icon for your wireless card, double-click the icon to see a list of options.

On the menu that appears, you'll see an option called View Available Wireless Networks or something similar. Select this option and after a few moments you will see a list of available networks, including one or more named FreedomLink. Connect to one of the FreedomLink signals and then launch your Web browser.

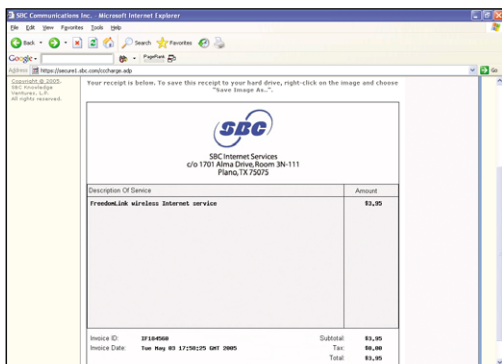
Your browser software will immediately load the Barnes & Noble wireless Internet access information page. You have to pay to play—you can't access any other site on the Web until you enter your preferred payment option.

You'll pay \$3.95 for a two-hour session. If you'd like unlimited access to all of SBC's FreedomLink hotspots, you can pay \$19.95 per month; however, this option requires a one-year commitment. That might sound like a lot, but it can be a steal if you love Barnes & Noble, are frequently on the road, and don't want to pay for pricey local broadband Internet access at home.

SBC also offers prepaid connection options. You can pay \$25 for three sessions of unlimited use, \$50 for eight sessions, or \$100 for 20



You'll have to confirm your payment option after you enter your credit card information. Be sure to note the time at the top of your ticket, as it tells you exactly when your session ends.



If you want to save your payment receipt, right-click the receipt and save it as an image to your hard drive.

sessions. Prepaid sessions expire 180 days after the day you buy them.

After you pay for access, you'll see a receipt that displays the amount charged to your credit card. If you want to save a copy of this receipt to your computer, right-click the receipt and save it as an image to a folder on your hard drive.

With the preliminary connection complete, you can surf the Web as you please. If you chose a two-hour pass for your hotspot access, you'll see a tiny FreedomLink window that displays a timer counting the time remaining in your session, however, if you use pop-up blocking software, you might not see this window, which is why it's a good idea to check your watch after you submit your credit card information.

It's worth noting that you don't have to buy a Wi-Fi plan in order to connect

to the Barnes & Noble Web site. When you first connect to the FreedomLink signal and load your browser, you'll see a link on the right side of page to that takes you to the Barnes & Noble site. You can use the site to look up information on books, authors, and the bookstore itself.

Plot Twists

It's important to remember that the Wi-Fi access at Barnes & Noble isn't secure. In fact, if you check the company's information brochure regarding each store's wireless access, you'll see a fine-print disclaimer indicating that data security is your responsibility, not the company's. Be sure to take the proper precautions when you use these hotspots. If you aren't familiar with the techniques you can use to protect your computer and your data in a public wireless environment, SBC recommends that you check out some security tips on its Web site.

At the very least, you'll want to use a basic firewall program to protect your PC. If you're using the company notebook, you should be all set. If you're using your own computer and aren't ready to spend money on a firewall program, you can download a fully functional version of ZoneAlarm (www.zonelabs.com), which is free and will protect your PC from many threats.

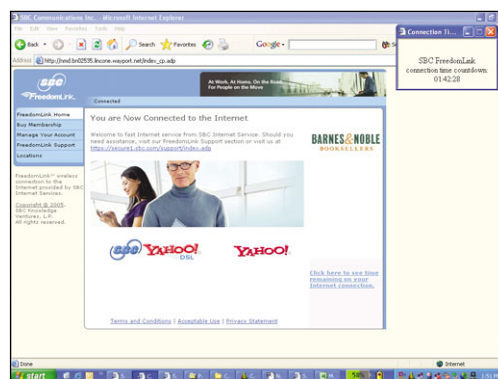
You can also shield your computer by turning off the file sharing option. In Windows 98/Me, open the Control Panel by clicking Start, Settings, and Control Panel. Double-click the Network icon, click File And Printer Sharing, and then clear both checkboxes. In Windows 2000/XP, open the Control Panel, right-click the Network Neighborhood icon, and click

Properties. Right-click the Local Area Connection icon and click Properties, and in the list of options, clear the checkbox for File And Printer Sharing For Microsoft Networks.

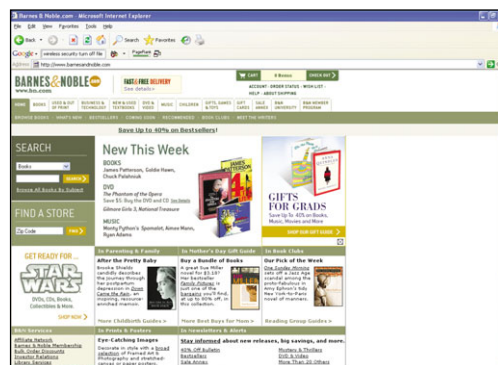
Epilogue

The beauty of Barnes & Noble's Wi-Fi access is that you can avoid paying hefty fees for a high-speed home connection and use your FreedomLink account at thousands of spots all over the country. The drawbacks are that you can typically only use these access points when the businesses are open and that you have to be very diligent about securing your computer. Take the proper cautions, though, and you'll quickly see why public access at stores like Barnes & Noble is so convenient. ■

by Nathan Chandler



After you connect to a FreedomLink access point, you'll see a countdown timer that tells you how much time you have left to surf. If you're using pop-up blocking software you might not see this window.



You don't need to pay for a connection to the Barnes & Noble Web site. Here you can browse book, author, and other helpful information.

Denon's philosophy is simple.

Either
you're
innovating
or
you're
imitating.



Introducing Denon's New AVR-5805

The World's First 10-channel A/V Receiver With Fully Configurable 4-zone Capabilities

A Breakthrough In Multi-source, Multi-zone Flexibility

For the home entertainment enthusiast and custom installer alike, Denon's new AVR-5805 delivers unprecedented four-zone home entertainment integration and control — all from a single component. With 10 configurable and discrete amplifiers, 16-channels of audio output, and the world's first-ever ability to drive two fully independent 5.1 systems, the AVR-5805 will also route audio and video signals from up to four independent sources and distribute them to up to four separate zones throughout the home. Its advanced capabilities even allow discrete power, source selection and volume control of each zone. And flexibility is just the beginning. Read on.

Masterful Technologies And A "Sweet Spot" For Every Listener

Behind the AVR-5805's newly designed, easy-to-read front panel display is a profusion of powerful technologies. An Equal Power amplifier section delivers a massive 170 watts of high-current power into each of its ten channels, processing for every popular 7.1-, 6.1- and 5.1-channel surround sound format — from Dolby (including Pro Logic IIx) and dts, to THX Ultra2 and THX Surround EX. The AVR-5805 also introduces the latest in Auto Setup Calibration and Equalization with the Audyssey MultEQ_{XT} system, tailoring sound not only to the listening environment but also to the audience. This advanced technology analyzes and calibrates six critical settings including variable crossover point detection. It also determines the correct frequency response for up to six separate listener positions and then averages all six. The result? Literally a "sweet spot" for every listener in the room.



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This is innovation.

Advanced Video Conversion And Denon's Exclusive Circuitry

The AVR-5805 offers a full complement of advanced processing capabilities like HDMI/DVI digital video selection, video up-scaling (including Faroudja DCDi technology for analog sources) and the world's first dual, independent video conversion for unmatched simplicity and the highest picture quality from all your video gear. For even greater A/V performance, it employs the most advanced Texas Instruments' and Analog Devices' 32-bit DSP processors, Burr-Brown 24-bit/192kHz audio DACs, as well as Denon's newly improved DDSC-D (Dynamic Discrete Surround Decoder-Digital). And to top it off, exclusive Advanced AL24 Processing Plus circuitry maximizes all source signals so that the high-resolution DA converters work at peak capacity.

More Connection Options Than Any Receiver In The Industry

In addition to an extensive complement of digital and analog A/V connections, the AVR-5805 includes a full array of "custom installation" features: assignable high amperage DC trigger outputs, dual RS-232C ports to facilitate integrated system and PC connectivity, and a built-in Ethernet port that adds more system control as well as future updates and upgrades. In-demand connection options include 6 high-bandwidth (100 MHz,) HDTV-compatible component video inputs, HD switching for 2 zones and much more. Finally, the latest version of Denon Link 3 and dual IEEE-1394 inputs allow for reception of high-resolution, multi-channel digital audio data directly from compatibly equipped DVD players. It all adds up to total flexibility and the ultimate level of sonic performance. Denon does it again.

DENON
The First Name in Digital Audio

Web Destinations

Travel-Booking Sites

"Get the best deal." It's a guiding dictum echoing in your head. Business travel plans in hand, it's you vs. companies who want to violate your primary directive. Armed with the Internet, besieged by commercials with talking lawn gnomes, you must decide what online travel service will actually help you. Expedia (www.expedia.com), Hotwire (www.hotwire.com), Orbitz (www.orbitz.com), and Travelocity (www.travelocity.com) all proclaim reliability, ease of use, and boss-impressing prices. What do these sites have in common? What separates them? Where do you go from here? Relax, weary traveler, a deal is out there, you just have to find it.

Expedia

Like many online travel sites, Expedia's site is divided into categories that include flights, hotels, cars, vacation packages, maps, cruises, corporate travel, and more. The home page offers various promotional packages, but chances are the Last-Minute Cruise section won't help a business traveler.

What may be of assistance is Expedia's easily navigated Create Your Own Trip section. As expected, the more options you add, the more you save. If you're like many travelers, the trifecta of car, flight, and hotel is in your future. Simply type



your information into the appropriate fields (Departing From, Going To, Return, and so on). Expedia returns a series of travel packages that match your request, complete with a picture of the hotel, flight times, and rental car information.

Most exciting is Expedia's Corporate Travel tab, which offers services and discounts to encourage your participation. Companies that enroll will get access to 24/7 customer service, savings of up to 20%, frequent flyer enhancements, and automatic unused ticket notification. These offers are great but require a level of participation between your company and Expedia.

Hotwire

If Expedia won't fly, perhaps its online partner will. Hotwire can get you deals that are "below

published" prices but requires that you be flexible. How flexible? Well, so long as you don't care when you fly, with what airline you will fly, from which company you rent your car, or what time of day you leave or return, you can score a pretty good deal.

Like Expedia, Hotwire's site is divided into several categories. Notably missing is the business traveler area, which is deferred to Expedia. Hotwire claims to specialize in last-minute travel deals, offering a slew of packages that are ready for quick consumption. Selecting one of the packages or entering your information into the search fields will reveal the ever-ambiguous Hotwire offers, temptingly referred to as Hot-Fares or Hot-Rates.

Prices are generally lower than those Hotwire's sister site can offer, but be aware of the limitations inherent in using Hotwire. The more specifics your trip requires, the less Hotwire will satiate your perfect-trip hunger.

Orbitz

Like Expedia and Hotwire, Orbitz is divided into a variation of the usual sections. Entering trip specifics into the Quick Search tab generates a results list with more packages per page. The default search is set for Flight information, but you can switch your search to Flight

The screenshot shows the Orbitz search results page. It features a 'Sort by' dropdown menu with options like Price, Star Rating, Trip Picks, and Hotel name. Below this, there are two hotel listings: 'Crown Plaza Hotel - Los Angeles Int'l Apt' and 'Wyndham Hotel - Commerce'. Each listing includes a photo, a brief description, and a price. To the right, there is a 'Change your search' section with dropdown menus for Departing, Returning, and Adults. At the bottom right, there is a 'More packages!' section with a list of destinations.

Hotwire is cheap but hides details.

The screenshot shows the Expedia website's corporate travel section. It features a navigation bar with links to home, flights, hotels, cars, vacation packages, cruises, activities, deals & destinations, maps, and corporate travel. Below the navigation bar, there is a 'Welcome' message and a 'Maximize your travel savings through higher online adoption' banner. To the right, there is a '50/50 Guarantee' section and a 'Full Service' section. At the bottom, there is a 'Program Features' section.

Expedia's corporate travel section has plenty of incentives for companies that register.

+ Hotel or Hotel + Car. Orbitz displays search results that feature a photo of the hotel and a rating of its facilities. You can organize the results based on Best Value, Lowest Price, Distance, or Star Rating. Clicking any of the photos gives you information about potential lodging.

Orbitz has more results per page for easy viewing.

The options and clear layout are helpful, but Orbitz makes it difficult to calculate all aspects of the trip at once. Whereas many travel-booking sites encourage the combination of car, flight, and hotel, Orbitz suggests a selection of a mere two of the three at once. This prevents an easily researched package, leaving any traveler with a “some assembly required” feeling.

Like Expedia, Orbitz covets the business traveler. Orbitz For Business (biz.orbitz.com) details a variety of business incentives. The business center offers 24/7 travel specialists, low transaction fees, and other savings. Orbitz rewards frequent flyers and businesses that use its services regularly.

Travelocity

Despite using a garden gnome as its spokesperson, Travelocity doesn't seem to mess around. The site is divided into similar categories as the other travel sites we visited. Like Orbitz, Travelocity doesn't initially allow for the three-pronged car, flight, hotel search.

With no triple-threat searching available, your Travelocity experience begins by deciding whether to search for hotel, car, or flight individually or opt for the only combo of flight and hotel. After Travelocity displays your travel options, you can sort the results by Rating or Price. If your search included lodging, you'll see a photo of the hotel alongside the package information, underneath

which is an option to see additional pictures. You can pare down your results using the Modify Your Search feature. You can add a rental car, but only after you complete your air and lodging search. The Last Minute Deals tab provides you with suggested travel package deals based on how last minute the trip is; check out the Top Deals area for even more deals.

Travelocity Business offers a list of features that sound familiar. Backing its claims with a Savings Calculator, Travelocity boasts discounts on car rental rates, full-service hotels, and flights. In addition, Travelocity offers constant service via customer care representatives. Depending on your company's loyalties, the road to where you're going may wind through Travelocity.

A Word Of Caution

Fear fare-jumping. This term describes price shifts (usually upward) during the booking process. Consumer Reports WebWatch (<http://64.78.25.46/pdfs/cross-border-examination.pdf>) noted that Expedia, Orbitz, and Travelocity had

recent incidents of fare-jumping. Each of these sites issues immediate notifications, but would-be travelers would do well to pay attention when searching for travel deals. In case of a discrepancy, contact the site's customer service representatives.

Happy Trails

So there it is. Your deal-seeking travel tools are now laid bare. With a little knowledge and persistence, you can walk away with flight, hotel, and car reservations that would bring a smile to the most cost-conscious controller's heart. The differences between most of the sites we looked at aren't enormous, but slight nuances in your travel plans may help you decide which site is best for you.

by Ryan Syrek

The Best Of The Rest

Although the big four may grab the headlines, a few other sites eagerly await the chance to assist you. Here are several notables that are standing in the travel-booking on-deck circle.

AirGorilla

www.airgorilla.com

Claiming to “stomp the competition,” AirGorilla gives users the option to search by international locations, multiple destinations, class, and airline. The site presents results in straightforward fashion with airline information clearly given. Tailored more to vacationers than business travelers, AirGorilla is worth checking out if airfare is your prime concern.

CheapTickets

www.cheaptickets.com

Offering the same spate of categories that Expedia boasts, CheapTickets makes it easy to book any combination of travel necessities, letting you decide specifics on car type, travel time, and hotel region. Although the prices are a little high, CheapTickets deserves an honorable mention.

priceline.com

www.priceline.com

As William Shatner has proclaimed for some time now, priceline.com lets you search in one of two ways. You can perform a traditional search in which you provide specific information such as airline, hotel, and so on. However, if you are more concerned with price, enter in your desired total and watch priceline.com suggest options that meet your number. The packages are shrouded in secrecy, but hey, at least you know the cost.

WebEx

Hold A Meeting Anywhere

When you're on the road, collaboration with colleagues and customers can often be difficult. Long-distance conferencing used to consist of individuals calling into multiple speakerphones situated in a conference room, with meeting attendees constantly updating one another as to which page of a PowerPoint presentation they were viewing or sharing the URL of a Web page that everyone was viewing. Annotating existing documents, sharing meeting notes, and other collaborative tasks were huge hassles, which oftentimes convoluted a process intended to make things simple.

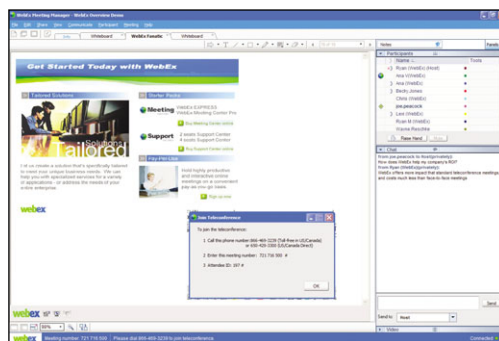
If the company you work for uses WebEx, the unified "Web Conferencing, Video Conferencing, and Online Meeting Service," you're in luck. WebEx makes long-distance collaboration not only possible but remarkably easy. The host of your meeting will define the parameters for your teleconference, including time, date, available services, and communication types.

Make Sure You're Invited

Before the start of the scheduled meeting, each attendee will receive an email containing a URL to click to enter into the meeting. This URL will indicate to WebEx all the necessary information required to place you into the proper meeting and notify the host that you are attending, so all you have to do is click the link. However, if you are a late or ad hoc participant or you cannot find your email, it's still very simple to join a meeting in progress. Simply go to www.webex.com and click the Join link in the upper-right corner. You will be prompted to enter the meeting number, as well as pertinent information, such as your name and email address.



Now that WebEx knows who you are and which meeting you are attending, it will automatically begin loading the meeting utility. If it is your first time using WebEx, you will have to download the WebEx player. It's a small download, installs quickly, and requires no "tweaking" to work behind a firewall or other infrastructure; all that is required is a Web browser. A window will pop up



When you first join a WebEx session, you will be prompted with the telephone number and meeting number to join the teleconference.

asking you to download the WebEx software. Click Yes to Accept. Once it has finished installing, you will automatically enter the meeting.

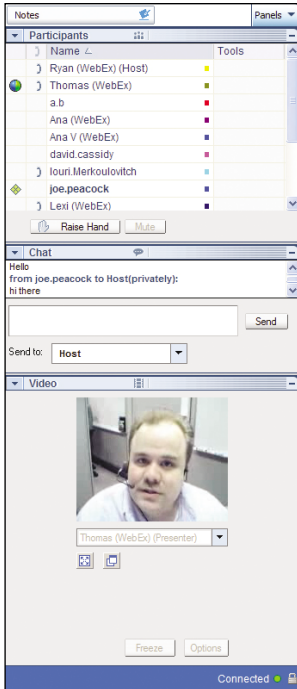
If your host chose to enable teleconferencing, a small window will appear that will prompt you to call a toll-free number. Once you dial the number, you will be asked to enter the meeting number and your attendee ID and you will be automatically connected to the teleconference. (You'll only be connected if the teleconference is in session; if not, you will be placed in a hold queue until the host or hosts arrive.) Some meetings will have "callback" enabled, so that when you enter the meeting the host will be prompted to call the number you provide. This goes a long way to reducing the number of cellular minutes spent on the teleconference. The host may also enable VoIP, allowing you to hear and speak via your notebook's speakers and microphone.

Get To Know Each Other

Now that you're connected and participating in the meeting, it would probably be helpful if you knew about some of the features that might be used during your conference. In the upper-right corner of the screen, locate the Participants window. This window will list the names of both the attendees and the hosts for the meeting. It also indicates which attendees are connected to the ongoing teleconference and whether or not their microphone is muted or active. To set these options for yourself, simply right-click your own name and select either Mute or

Unmute, according to your preferences. The host also has the option of either locking or unlocking the Mute option for any or all attendees.

Just below the Participants window is the Chat window. This section of the application allows attendees to chat with the entire group, individual attendees, or the hosts via text. This is an extremely helpful function when you have an individual question or comment that you'd like to ask without interrupting the current speaker during the teleconference. Click the Recipient drop-down menu to select the persons



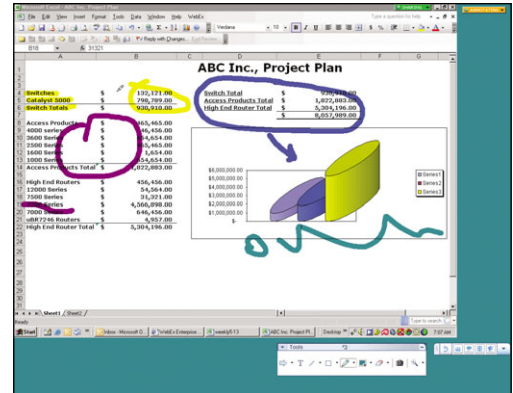
See who's in attendance and chat with them in real time during meetings.

Compare Notes

In the main window, you will see the screens, applications, and documents that compose the main presentation. Most presentations will proceed much like a PowerPoint slideshow, with main points and notes being called out in regular presentation form. WebEx also features Desktop Sharing, which lets the host make his desktop visible to all attendees and even allow them control over the applications running on their machine. For example, if a financial analyst has a spreadsheet open with the figures for the yearly budget displayed and there needs to be an adjustment to a column, the host can allow an attendee to modify the actual spreadsheet residing on the host's machine.

WebEx even features Document Sharing, so that during a meeting a host can make available any document on his or her machine. Each attendee will be presented with a window, from which they can download documents made available by the host. Once selected, click Download to bring the documents to the folder you specified in the dialogue.

This is also the area for the shared Whiteboard application, a feature which allows the hosts and participants to share ideas, notes, and diagrams via an online marker board, much like those present in your office's conference room. Each participant is assigned a color to differentiate each person's notes. Selecting different brush sizes, alternate colors and



Allowing meeting attendees to share documents enhances productivity and business processes.

textures, and marker types from the Whiteboard toolbar helps to enable a richer presentation experience.

During a presentation, the host may wish to poll attendees on any number of topics. WebEx features a real-time participant poll, which enables hosts to get immediate feedback from attendees on just about any topic imaginable. In order to vote in a poll, just click the option which corresponds with your choice and then click Vote.

The poll results, the Whiteboard, feeds from a Desktop Sharing session, presentations, chat logs, and video conferencing feeds can be saved into a transcript for future viewing. This transcript will also include copies of any documents shared during the teleconference, creating a complete replay of the meeting.

by Joe Peacock



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International Traveler

Do You Know Your Jacks, Plugs & Adapters?

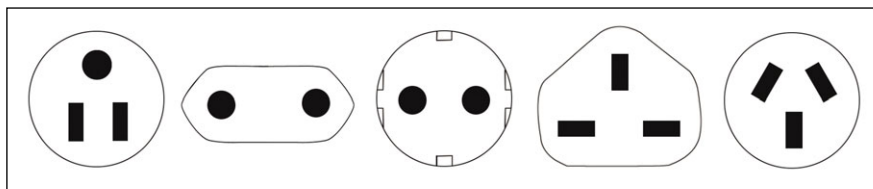


In earlier days, when people went abroad for the first time, they worried about a host of things: What's the food like? Will I be able to get around without knowing the language? People still have many of those same worries today, but there are other things to consider with all the electronics and computer items people take along with them on trips: Will my laptop work in Germany? Can I plug my modem into a phone in a Hong Kong hotel without frying it? Let's look at some easy ways you can deal with different electronics standards when traveling outside the United States.

Voltages & Frequencies

The differences between American (and Canadian) electrical standards and those of the rest of the world are twofold: U.S. standards require the use of voltages and frequencies, respectively measured in voltage and hertz. Power in the United States runs at 110 volts and

60 hertz. In many other countries, power runs at 220V to 240V and 50Hz. The 220V current is also available on a limited basis in the United States; some heavy-duty devices use 220V current,



Five basic types of outlets are used in most parts of the world. A single plug converter kit should let you connect with all five types.

but it is most likely those items are on a 220V circuit.

You may be wondering why there are separate standards in the first place. There really is no real reason for the different standards; they evolved separately, mostly due to local politics and historical accident. Japan, for instance, uses the same 110V/60Hz electrical

system as the United States, as well as the same television standard (the NTSC [National Television Standards Committee]); which may be in part due to close collusion between the two countries to rebuild after WWII.

Because of these differences, when you take an electronics item with you on your trip to another country, chances are the device won't work. In addition to different electrical standards, you are also bound to encounter different wall outlets than what you normally use at home. In a way, the fact that different outlets equal different electricity is a boon.

It Doesn't Hurt To Convert

When you bring your laptop, MP3 player, or most electronics devices to another country, there are two things you need to purchase in order to make them work. You need a plug adapter that will let you plug the device into a local wall outlet and you may need to get a transformer, so you can convert local voltage into something your device can use.

Finding an adapter is mandatory if you're visiting a country where plug types are different, but it isn't always necessary that you purchase a transformer. Many electronic devices don't use 110V directly, so they come with a transformer that changes wall outlet voltage into something usable. The charger for your cell phone and the

power adapter for your notebook computer are examples of transformers. Because a lot of cell phones and notebooks are manufactured for consumers in many countries, the devices are capable of accepting multiple voltages and electrical frequencies.

To be sure you won't need a transformer, check the labels on your cell

No Worries

If you are going overseas on vacation or for business, you should be aware that a few other countries use American power and plugs and don't require any special conversion on your part.

In Canada, the outlet styles and electrical standards are identical to American standards. Almost all of America's territories, including such destinations as Barbados and the Bahamas, also follow U.S. power standards. Japan and Okinawa use U.S.-style power, as does the Philippines. Brazil is one of the few South American countries that you will find you don't need to purchase additional hardware so you can use your electronics items. Lebanon is one of the few Middle Eastern nations that's U.S.-compatible, as well. ■

Adaptation

When traveling to a foreign country, you should always keep in mind there is a chance you'll need to buy an adapter or converter that lets you use electronics devices once you reach your destination. We gathered a few online resources that are bound to help you find what you are looking for. One good site we found is International Electrical Supplies (www.international-electrical-supplies.com). In addition to the transformers and plug adapters it sells, it provides a growing database of information about electricity in other countries, including what plug types to use. Stay Online (stayonline.com) is another excellent site because it lets you buy items according to destination country as well as equipment type.

Amazon.com (www.amazon.com), although it is known best for its books, also has great customer feedback on many consumer-electronics products. Amazon.com is worth a look as a first reference if you want to read about another user's experience with the product. Search for a make and model in Amazon.com's Electronics section to get information about a particular product. ■

phone's charger or your laptop's power block. You should see a description of the type of power the device can accept, such as INPUT: 110-220V 50-60Hz. If the INPUT rating shows it goes as high as 220V and includes 50Hz and 60Hz frequencies, then that device should work with just about any foreign voltage. All you need for that particular device is a plug converter. But if the label shows 110V 60Hz, you cannot use this device as-is overseas.

We should also note that you won't be able to use most devices that draw heavy power, such as hairdryers, on foreign voltages; plan to use local models instead of taking your own. Some of you may be wondering if you can take along your chargeable electric razor. The answer is yes; the charger plugs into the wall outlet, but the charger

itself isn't a motor. The razor has a motor but runs off its own battery.

If you only need to convert plug types, you can spend very little money and get something that you can use with almost any wall plug you encounter. Most plug converter kits consist of a series of adapters, but Kensington (www.kensington.com) markets a clever solution. The all-in-one Travel Plug Adapter (\$19.99) contains plugs that snap in and out, Swiss Army Knife-style, as needed. This makes for far less to carry around and less pieces to lose.

If you're dubious as to whether you can decipher the labels on your electronics, or you just want to be absolutely sure you're on the right voltage no matter what, spend the extra cash and pick up a voltage converter kit anyway. Think of it as electronics insurance. When you

pick up a voltage converter, always get one that is rated for continuous duty and that produces sine-wave current (not square-wave) that can work with electronics. The TravelArts (www.travelarts.com) TA-50A is one such transformer; check the label of whatever you buy for the same criteria. Also bear in mind that many voltage converters and plug adapters will only support ungrounded (two-prong) electronics. ■

by Serdar Yegulalp



Reduce The Effects Of Jet Lag

Most travelers experience jet lag at some point in time. Here's a few ways to reduce the effects:

A few days before you leave, adjust your bedtime by an hour each day to match your trip schedule.

At the beginning of the flight, set your watch to the time zone you'll be visiting.

Drink lots of water before, during, and after your flight. High-protein foods can help you stay awake, carbohydrates promote sleep, and fatty foods may make you feel sluggish.

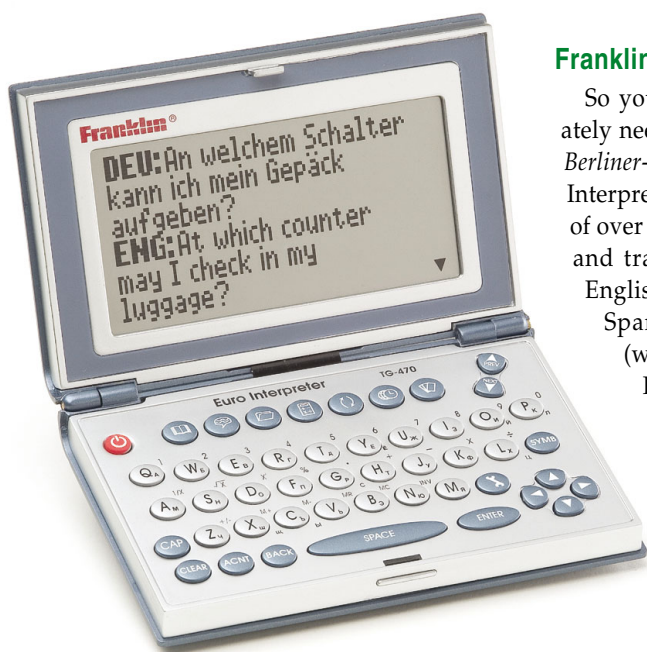
Keep sleep hours that match your destination while on the plane.

One For The Road

Business Travel Accessories

Some people are born to travel. With mobility in their genes, these road warriors can go for days foraging single serving bags of honey roasted peanuts and hotel room French roast coffee. Others are not as blessed. If you prefer the comfort of your corner office to the comfort of a Comfort Inn, these handy accessories might make your next business trip a little more bearable.

by Vince Cogley



Franklin TG-470 Euro Interpreter

So your flight was unexpectedly rerouted through Berlin, and you desperately need to find a *badezimmer*. Before you commit an embarrassing *Ich bin ein Berliner*-esque faux pas, it might behoove you to consult Franklin's TG-470 Euro Interpreter (\$79.95; www.franklin.com). Packed with an extensive vocabulary of over 400,000 words and phrases, this handy gadget slips in your shirt pocket and translates the following languages in both directions: Czech, Dutch, English, French, German, Hungarian, Italian, Polish, Portuguese, Russian, Spanish, and Turkish. In addition to being your own portable C-3PO (without the constant warnings of impending doom), the TG-470 Euro Interpreter has a currency/metric converter, world clock, EURO Converter, and five epic and entertaining games, such as Hangman and Keyboard Wiz.

ICP Solar Technologies iSun

Plants have been mooching off of the sun's golden rays for millions of years, and you don't have to be a card-carrying member of Greenpeace to reap the rewards of a little environmental energy. The ICP Solar Technologies' iSun (\$69.99 to \$89.99; www.icpsolar.com) will supply all of your portable electronic devices with an ample supply of juice, courtesy of that giant yellow sphere of nuclear chain reactions. The iSun comes with enough plugging accessories to ensure it's capable of powering over 90% of all small electronics. Although a single unit doesn't deliver enough "oomph" to power a laptop computer, you can daisy chain multiple iSun units together for more get-up-and-go. Batteries are, of course, not included.





Pacific Designs Action II Rolling Backpack XL

After spending several thousand dollars on a new laptop, it doesn't make much sense to be chintzy with the laptop bag you buy. Sporting its own in-line skate wheels and enough room to easily stash most 17-inch widescreen laptops (such as Apple's and Dell's), the Action II Rolling Backpack XL from Pacific Design (\$59.95; www.pacificdesign.com) is the six-bed, seven-bath luxury

home your laptop has always longed for. As its name suggests, the Action II Rolling Backpack XL functions as either a backpack or a rolling bag for your laptop. An elastic/nylon flap covers the wheels if you opt for the backpack. It's made with a stylish yet rugged nylon microfiber, and a water-resistant bottom offers even more protection from the elements.



Katadyn Micropur MP1 Purification Tablets

How many times have you heard the phrase "No beba el agua, señor"? As much as we'd like an Evian stand at every street corner, clean, sanitary drinking water may not always be at our fingertips. Katadyn, known for its extensive line of water purification products, produces the only EPA registered purification tablets (\$13.95; www.katadyn.com), a handy product when the only available water sources are less than savory. A single Micropur MP1 Purification Tablet rids up to a quart of water from viruses, bacteria, cryptosporidium, and Giardia. The chlorine dioxide tablets use the same chemicals as municipal water suppliers to purify a water sample. Each pack-age contains 30 tablets and is ideal for any situation where you can't bring along a water bottle.



Eagle Creek TSA SearchAlert Lock

Having the Transportation Security Administration meticulously search through your luggage isn't necessarily a bad thing, but you shouldn't have to sacrifice your suitcase's security when the TSA isn't inspecting it. Fortunately, Eagle Creek's TSA SearchAlert Lock (\$10; www.eaglecreek.com) is a TSA-friendly padlock for your bags. This Travel Sentry certified lock has a secured set of codes TSA baggage screeners use to safely open the lock without damaging it. The Search Alert window shows you if security personnel did screen your bag before the flight. The TSA SearchAlert Lock features a die-cast zinc body and a steel shackle.

Excalibur Electronics Massage Pen

It always seems like you're left with the option of issuing a polite "down in front" or craning your neck to an uncomfortable degree in order to see your meeting's PowerPoint presentation. After opting for the latter too many times, it may be time to hit up your favorite masseuse. But what happens when you're traveling in a different hemisphere? Sure, it's a far cry from a Swedish massage, but Excalibur Electronics' Massage Pen (\$14.95; www.excaliburelectronics.net) may be able to provide some pinpoint relief when you're on the go. It sounds hokey, but the Massage Pen includes diagrams for specific pressure points so you know exactly how to relieve that irksome muscle tightness.



Looking Into Longhorn



Scot Finnie is the editor of *SecurityPipeline.com*, editor at *TechWeb.com*, and author of *ScotsNewsletter.com*. He has served as managing editor for *Windows Magazine* and editor for several other computing publications. Catch up with Scot at his newsletter Web site (www.scotsnewsletter.com) or send him feedback at scot@pctoday.com.

Another layer of the next version of Windows, code-named Longhorn, began to emerge at the Microsoft WinHEC event earlier this year. During a Bill Gates keynote, several aspects of the next generation interface were demonstrated and attendees (which included yours truly) were given a recent preBeta 1 build of Longhorn for evaluation purposes.

Unfortunately, the alpha software handed out at the show was not as fully enabled as the version that was used for demonstration purposes. But between the code I have, the keynote demos, and the many sessions that I attended, many things are becoming apparent about Longhorn that inquiring minds want to know. Here are some of the emerging facts.

Search-Based Interface

Microsoft understands that your data is spread out in many directories on your hard drive and can be difficult to locate. To remedy this, Microsoft is pushing ahead with its search-based interface, which will be apparent in Windows Explorer and elsewhere in Longhorn.

Virtual folders, new to Longhorn, let you search for files based on the way you think about the actual data (that is, what the data pertains to, such as your family, friends, job, school work, and hobbies) rather than by file

names and file types. Virtual folders look much like other folders, but they use Longhorn's search features to help you locate all types of data files that relate to something recognizable, whether that's something general such as your family (using our example) or something more specific such as your spouse, child, or parents.

The Search feature is also available on the Longhorn Desktop. A magnifying glass icon opens a version of the folder window that lets you run full-text queries with multiple operators on all of your data. You can also type a file name into a Search field exposed on the My Documents folder to search for a specific file. This Search feature doesn't look at the contents of files, but you can keep typing new words to rapidly winnow the search. This Search option is perfect for when you're looking for a file whose name you know but whose location you're not sure of.

Late last year I wrote that Microsoft should not attempt this kind of search feature without the WinFS file system and the SQL (Structured Query Language) database that is planned to underpin the WinFS file system when it eventually ships—about a year after Longhorn does. My concern at that time, one that I still have, is with the performance of the queries and also the system overhead needed

by Windows' full-text-indexing service. According to Microsoft Windows Product Manager Greg Sullivan, who I interviewed at WinHEC, the existing Windows search indexer will be dropped in favor of new technology yet to be named. Hopefully, Microsoft will be able to build something fast enough to deliver the necessary usability to make these features more than just something that sounds good.

Transparency & UI

Much has been made of Longhorn's new video subsystem's ability to draw vector-based images, deliver transparency with reflections and blurring, employ hardware-based 3D, scale icons and text on the fly, and a raft of other visual features. Only a tiny bit of these presentation features are actually built into the code I'm working with, but Microsoft did show off some of the forthcoming features at WinHEC. Until you see this ability in Longhorn, and even after you do, you may think of this new level of visual presentation as window dressing. However, I've seen enough already to disagree with that viewpoint. The fact that windows hide behind windows is an endless productivity problem in what is, for the most part, the 2D GUIs (graphical user interfaces) we work with today. Apple's OS X, especially the new

Tiger version, reaches the farthest toward what Microsoft is trying to bring about for Windows.

There's another problem, though, that GUIs suffer from. The graphical objects they present for us to click or manipulate—dialog boxes, buttons, and program windows—get in the way of our data. One way Microsoft has shown that it will make some hard use of transparency for user interfaces is the touchscreen transparent donut the company is showing for Longhorn mobile interfaces. This on-screen structure looks something like a large picture of a CD with a hole in the middle. It's a visual pointing and selection device for touchscreen computers. Press anywhere on the 360 degrees of the donut's control surface and you direct it in the direction you press. Press the donut hole to select and drag or to activate (press ENTER). Because the donut object is transparent, it's not in the way of everything.

In the WinHEC Longhorn build, only the title bars are really transparent. There's no real useful advantage to this because the transparent area is too small. I expect Microsoft to do its best to make transparency more than just a bell or whistle. If it doesn't, I'm not sure what the point is.

New & Notable

Windows Longhorn will ship with a new RSS (Really

Simple Syndication) reader, Internet Explorer 7.0 (including tabbed browsing), built-in anti-spyware functionality, a limited user account as the default Windows login, faster boot-up times, faster hibernate and resume times, and a new document format and printer page-description language called Metro. Metro is aimed at Adobe's PDF document format and PostScript page-description language. To take advantage of the format in print, you have to buy a new Metro-based printer; to use it electronically, all you need is Windows Longhorn.

Metro is designed to render Longhorn's new 3D, vector-based imagery, including transparency, reflections, and blurring. Metro is a good thing so long as the need to buy a new printer doesn't become a bigger need (or a bigger expense) than it should.

One of the smaller new aspects of Longhorn that I especially like is the program-search field that appears on the Start menu. It lets you rapidly search for a program installed anywhere on your computer just by typing in a few letters of the program's name. As you type, all the programs that contain the letters you typed so far appear in a list on the Start menu. (In the WinHEC build, the feature doesn't work that well, but it's early yet.)

Microsoft has also committed to losing some things

that many of us have come to dislike, such as all the My This or My That labels that adorn a lot of things. In the WinHEC build, it's still called My Documents but My Computer is now called just Computer. The little animated dog in Windows Search (reminiscent of the annoying Clippy from Microsoft Office) has been "sent to a farm," as one Microsoft exec joked with me privately.

Timing

Be advised, whatever you are reading (including this column) about Longhorn now is based on incomplete information. Longhorn will not even be close to complete until Beta 2, and I don't expect to see that build until January 2006. Beta 1 should have arrived last month, so it is likely you have been reading dribs and drabs of information from the press, and you will do this for the rest of the year.

You should be able to buy the finished version of Longhorn by early December 2006, unless Microsoft runs into a severe problem. It's too early to know about systems requirements other than this: You'll need at least 512MB of RAM and either an ATI Radeon 9800 or NVIDIA GeForce FX 5900, or better, to take full advantage of Longhorn.

More details to follow in future *PC Today* issues. ■

by Scot Finnie



Microsoft Excel 2003

Chart Your Information

A chart or graph is an excellent resource any time you want to interpret numerical data at a glance. The Chart Wizard in Microsoft Excel takes you step-by-step through the process of turning a spreadsheet into an attractive chart.

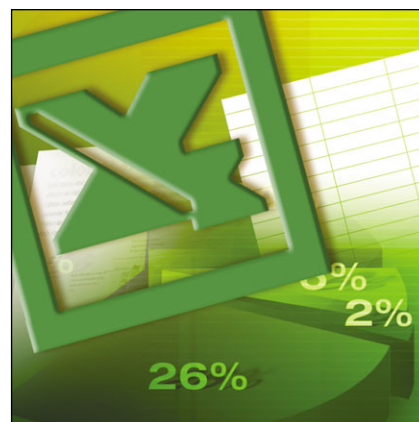
The simplest way to begin is to start with a spreadsheet already full of data. For example, you could chart your annual expenditures to demonstrate to your household where all the money is going. In that case you could have a list of expenses and a corresponding list of money spent during a certain time period.

Chart Wizard

Open your Excel spreadsheet and click the Chart Wizard button, which looks like a little bar graph. This button is a default on the standard Excel

toolbar. If you don't see it, right-click the toolbar and select Standard. When you click the button, the Chart Wizard dialog box will open. Select the chart type that is closest to what you'd like to see and start from there. Don't worry if the preview chart doesn't look exactly the way you want. You can modify the chart through the Wizard and afterward, so there are plenty of opportunities to change details.

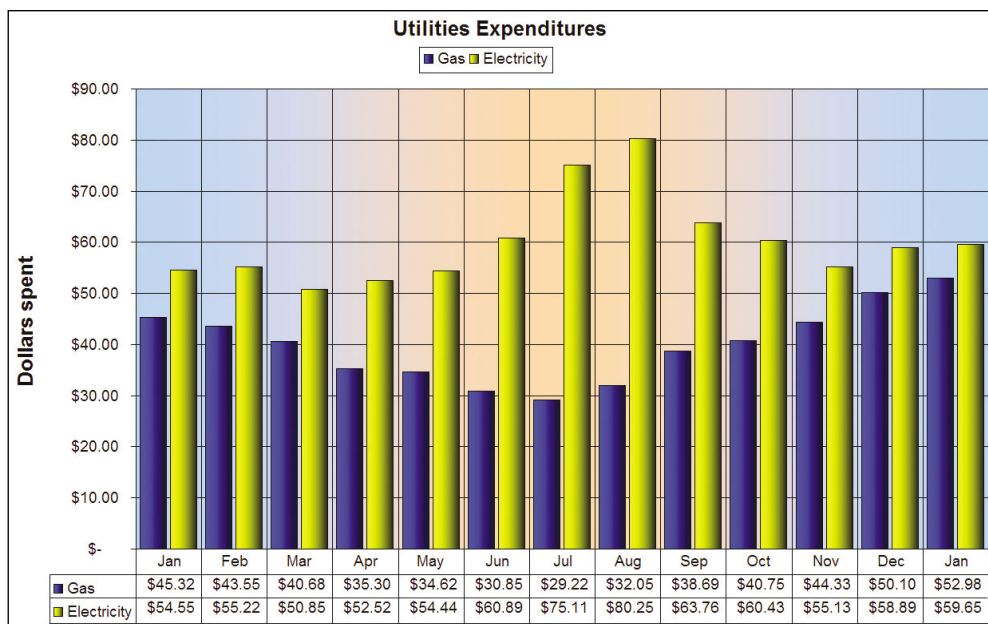
Step 1: Chart Type. There are 14 Standard Types of charts. Each type of chart has a thumbnail illustration next to the name, so you can see what it looks like. Click the type you prefer and select a subtype from the Chart Sub-Type menu. Click the Press And Hold To View Sample button to view a sample of what your data will look like plotted in that type of chart.



On the Custom Types tab, you can select a chart type, alter it, and save it as a User-Defined custom chart. If you would like to make multiple charts with similar formatting, such as categories of monthly expenditures, saving a chart as a User-Defined custom chart will prevent you from having to format it each time.

Step 2: Chart Source Data. The Source Data window has two tabs to help you select your data. The simplest way to choose the range of data in your chart is to highlight the desired cells in the spreadsheet. Your selection (called a series) will then appear in the Data range box on the Data Range tab. Choose to arrange your series of values in Rows or Columns, whichever way you have already arranged your spreadsheet.

The Series tab allows for more complex data options. If you want to plot data that you cannot select at the same time (because they do not appear in the same spreadsheet, for example), you can use the Add function. The first series you selected on the Data Range tab will already appear in the numbered series list. Click the red arrow button next to the Values box to select the cells of your next series. Highlight the cells you want, and they will appear in



Excel charts are simple to create and are useful for designing elegant displays of information.

the numbered series list and on your chart.

To name each series in the chart legend, type in the Name box, or select a cell in your spreadsheet that contains the name of the series. The Category (X) Axis Labels field allows you to label your X axis values. For example, click the red arrow button and select the series of months in your spreadsheet to make them appear as labels on your chart.

Step 3: Chart Options. The Chart Options window has six tabs, each of which allows you to make simple changes in the format of your chart. On the Titles tab, you can enter titles for your chart, including a general title and specific titles to designate the unit of measure or label on each axis. On the Axes tab, you can select the appropriate check boxes to show or hide the labels on your axes. On the Gridlines tab, check the box to show or hide the major and minor gridlines on your chart. Gridlines can be useful to guide your reader's eye, but keep in mind that too many lines can clutter up a chart. On the Legend tab, check the Show Legend box to show or hide a chart legend, which designates the color of each bar or line on your chart. You can also choose where you would like the legend to be placed in the chart area.

The Data Labels tab lets you go one step further than a legend and put labels right in the plot area of your chart. You can choose to have the series name, category name, or value appear. Be cautious with this function. While these labels can be useful with a pie chart to label the pie pieces on the chart itself, too many labels in the plot area can obscure your data. The last tab, Data Table, allows you to show a data table underneath your graph. This table will contain all the data on your spreadsheet in a miniature spreadsheet format. You can also select whether or not to show the legend keys in the data table.

Step 4: Chart Location. You can save your chart as a new sheet or place it in an existing sheet in your spreadsheet. When you have selected the location, click Finish, and your chart will

appear. If you want something on the chart that isn't there already, you must return to the Chart Wizard to insert it. If there is a feature included on your chart that you would like to remove, you can click it and press DELETE or select Clear from the right-click menu. If you would like to place your chart into a Word or PowerPoint document, simply use the Copy and Paste commands on the right-click pop-up menu or toolbar.

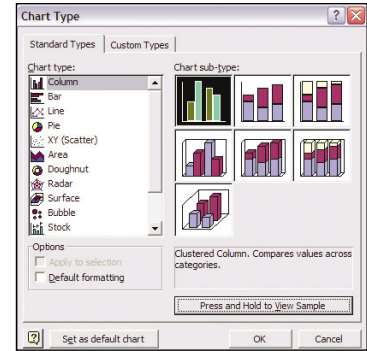
Fine-Tune Your Chart

Now your basic chart is set up, and it's time to do some more detailed formatting. You can format any portion of your chart by first selecting the area you want and then right-clicking to open a pop-up menu. The four Chart Wizard steps will appear on every menu. However, the top option on the right-click menu depends on which area of your chart is selected when you click. In each case select the top option to open a formatting dialog box.

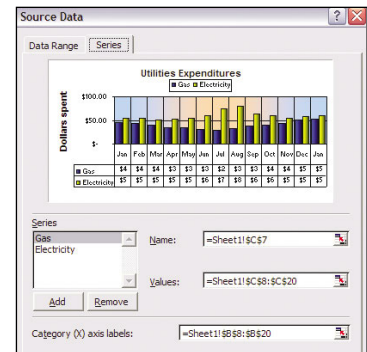
There are several formatting tabs available, depending on which feature you have selected. The Patterns tab includes colors, borders, and fill effects. The Font tab includes all the usual font choices: Font, Style, Size, and Effects. You can change the orientation of your text on the Alignment tab.

The Scale tab allows you to adjust the scale and placement of your axes and gridlines. The default setting, Auto, will adjust the scale to include all of the data, even when you change the data in the spreadsheet. If you need to specify the number of decimal places or make other changes in the category of your numerical data, use the Number tab.

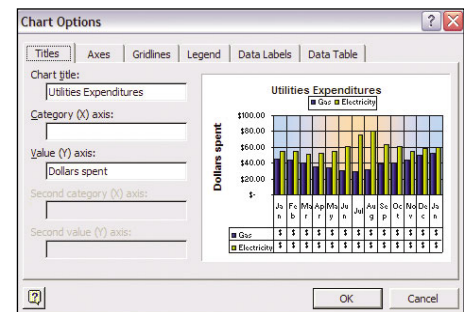
To change the way your actual data is plotted, use the Format Data Series dialog box. There are options in this dialog box to adjust various features of your data, including which series is plotted first (on the Series Order tab) and how your plotted data is shaped in terms of gap width and overlap (on the Options tab).



Excel offers several different chart types for you to choose from. Select one that easily conveys your information.



Use the Add and Remove buttons to adjust how many series are shown on your chart.



Use the Chart Options formatting tabs to tailor your chart. Because you can change the size of the chart, the preview chart shown may be different from your final chart.

Feel free to fiddle with these features until your chart looks the way you want. Now that you are familiar with the Chart Wizard, you can use Microsoft Excel to whip all of your data into shape. ■

by Liz Stefaniak

Microsoft Outlook 2003

Use Desktop Alerts

In Microsoft Outlook 2003, you can receive Desktop notification each time you receive an email message from a server using POP (Post Office Protocol; the most common Internet mail protocol). If you are part of a SharePoint Services environment using POP or Microsoft Exchange, you can also receive alerts for meeting requests, task reminders, or other Outlook items.

You can customize Desktop Alerts to suit your needs. You can also establish highly targeted custom alerts, letting you gain maximum benefit from this notification feature.

Turn Alerts On & Establish Settings

By default Outlook 2003 displays each alert as a semitransparent box at the bottom of your Desktop, near the System Tray. If you have never noticed an alert, Desktop Alerts may be disabled. You can turn Desktop Alerts on and establish a few preferences at the same time.

Begin by opening the Tools menu and selecting Options. On the Preferences tab under E-mail, click the E-mail Options button. When the E-mail Options dialog box appears, click the Advanced E-mail Options button under Message Handling. In the resulting dialog box, under When New Items Arrive In My Inbox, select the Display A New Mail Desktop Alert (Default Inbox Only) checkbox. Next, click the Desktop Alert Settings button. In the next dialog box that appears, you can extend the time frame for which alerts display and make them appear more or less transparent, as well. When you finish making

adjustments, click the Preview button to see how the Alert will appear and then click OK at each open window to exit.

Using Desktop Alerts

Outlook 2003 issues alerts on items that arrive in your inbox by default. The alert displays the sender, subject, and (for email messages) the first two lines of the message. When a Desktop Alert appears, you can perform several actions without opening the message. If you want to delete a message immediately, click the black X. If you want to flag the message for further identification, click the red flag. Click the down arrow and select Mark As Read to mark the message as read. To keep the Desktop Alert visible and active while you process it, position your mouse pointer on top of it.



Desktop Alerts appear as semitransparent boxes in the bottom right of your Windows Desktop.

Customize Alerts

If you receive multiple messages during a single mail-checking session, Outlook will select a single alert at random or, if the num-

ber of messages is substantial, it will generate a single, new mail alert. To ensure you receive an alert for a particular message, you must create a special rule.

Open the Tools menu and select Rules And Alerts. When the Rules And Alerts dialog box appears, select the E-mail Rules tab and click New Rule. In the Rules Wizard dialog box, select the Start From A Blank Rule radio button; Check Messages When They Arrive is selected by default under Step 1: Select When Messages Should Be Checked. Click Next. Under Step 1: Select Condition(s), select

the conditions for receiving an alert. Under Step 2, you need to click each underlined condition link and provide the requested information. Click Next.

Under Step 1: Select Action(s), scroll to the bottom of the list and select the Display A Desktop Alert checkbox. Select any additional desired actions you want Outlook 2003 to take with the message and provide required information under Step 2. Click Next.

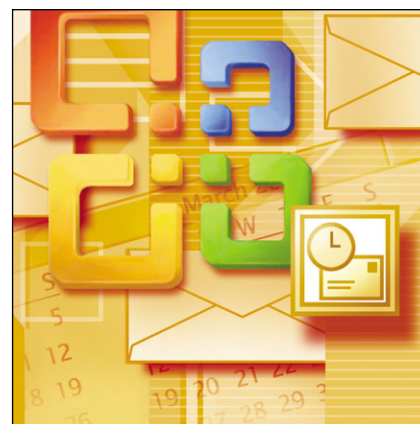
Under Step 1: Select Exception(s) (if necessary), add any exceptions that would prevent Outlook from processing this rule (and alerting you), providing required information under Step 2. Click Next. The final step is to name the rule and then click Finish.

Final Thoughts

Desktop Alerts can be a great way to stay abreast of your email inbox (and important messages) as you perform other tasks. If you find your Desktop Alerts aren't obvious enough, you can drag the Desktop Alert window to any location on your Desktop.

Alternately, you can create New Item Alerts instead of custom Desktop Alerts. These pop-up windows, which appear in the foreground of the Windows Desktop, are unavoidable, but they do not offer the processing options you'll find with Desktop Alerts. To create a New Item Alert, return to the "Customize Alerts" section. However, in Step 2, click the Start Creating Rule From A Template radio button and select the Display Mail From Someone In The New Item Alert Window option. Proceed as indicated above. ■

by Jennifer Farwell



Great theater deserves a great setting.



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Microsoft FrontPage 2003

Creating Image Maps & Hotspots

Sometimes a picture is worth a thousand words . . . and a FrontPage image map is worth at least that many. What's an image map? Just as the name implies, it's a graphic that includes multiple hyperlinked areas called hotspots. You can click a hotspot to activate the associated hyperlink and view the link location—such as another page within the site or even a different Web site. Because of this, including an image map on your site can increase the site's usability.

First Things First

Maps or other pictures with clearly defined borders work best as image maps because it's easy for site visitors to understand where to click—and what will happen when they do so. For example, a weather site usually has a map of the United States; visitors can then click a state to view its weather.

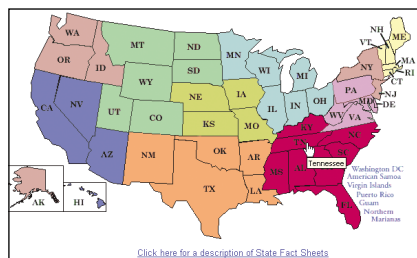
However, although an image map can be a useful addition to your Web site, you can't just use any old graphic for an image map. Because hotspots are invisible to Web viewers (although the mouse pointer usually changes appearance when it's moved over a hotspot), it's important that you choose a picture with logical clickable areas. Additionally, it's helpful to duplicate any hotspots as hyperlinked text for users who use text-only browsers.

Create The Image Map

Assuming that you've determined that an image map will enhance your page's usability and have located an appropriate graphic, you're ready to create the image map in FrontPage. Your first step is to switch to Page view and then insert the

graphic that you want to use as the image map. To do this, choose View and Page and then click the Design button at the bottom of the document window. Next, choose Insert and Picture and then select the type of graphic (such as From File) that you want to insert.

After you've inserted the graphic, you're ready to create hotspots on it. FrontPage includes three tools on the Pictures toolbar that you can use to "draw" hotspots directly on your graphic: The Rectangular Hotspot, the Circular Hotspot, and the Polygonal Hotspot. To display this toolbar, make



This map works great as an image map because clearly defined borders "tell" the site visitor where to click. The Web designer for this site also wisely duplicated the hotspots as hyperlinked text for those with slower Internet connections.

sure your graphic is selected, and then choose View, Toolbars, and then Pictures.

Next, choose the tool on the toolbar that most resembles the hotspot you want to develop. For example, if the clickable area you want to create is relatively symmetrical, you would typically use the Rectangular or Circular Hotspot tools. However, if the hotspot is irregular in shape, you'll probably want to instead utilize the Polygonal Hotspot tool.



Click the hotspot tool of your choice on the Pictures toolbar, and then drag and draw on the graphic where you want to create the hotspot using the "pencil" icon. If you're using the Rectangular Hotspot tool, it works best to drag from one corner to the opposite one; if you're utilizing the Circular Hotspot tool, drag the hotspot from the middle.

Using the Polygonal Hotspot tool is a bit trickier. To define a hotspot with this tool, activate the tool, and then click to begin drawing. As you move the mouse, a "stretched" line is created. Click again each time you want to change direction; when you click the starting point, FrontPage completes the shape for you.

When you finish drawing a hotspot, the Insert Hyperlink dialog box automatically displays. Use options in this dialog box to create the hyperlink, and then repeat the process for each hotspot you want to create.

Make Changes

To modify a hotspot, double-click it and then specify your changes in the Edit Hyperlink dialog box. You can also move a selected hotspot by selecting and then dragging it; press Delete to remove it. To view all the hotspots associated with a graphic, click the Highlight Hotspots tool on the Pictures toolbar. Click a second time to redisplay the image map.

Finally, go ahead and test your image map. First, switch to Preview view. Next, move the mouse pointer over a hotspot; click when the mouse pointer changes to a hand icon. If all goes well, the link location will display. ■

by Linda Bird

Adobe Acrobat 6.0 Pro

Adding Watermarks & Background Images

If you've ever wanted to mark a PDF file as "Completed" or "Archived," you'll appreciate a great Adobe Acrobat feature that allows you to quickly add a watermark or background image to a PDF. In this tutorial, we'll take a look at the differences between watermarks and background images and then introduce slick ways to create each.

Similar, Yet Different

Although the steps for developing a watermark or background image on an Adobe page are similar, they produce different effects. Acrobat defines a watermark as a graphic that appears on top of, or superimposed over, a page's text. For example, you could use a watermark to stamp a document "Approved." In contrast, a background in Acrobat looks as if it appears beneath the page's text and other graphics. You've probably seen this effect on Web pages, where the text is superimposed over a faint background image or pattern. In reality, it's usually easiest to experiment with both graphic effects until you get the look you want.

Convert The Graphics

Before you jump into creating a watermark or background, however, you need to make sure the file you use for the graphic has already been converted to a PDF. For example, if you have a photo or logo that you want to use as a background image, you'll first need to convert it to a PDF.

Next, open the file to which you want to add the graphic. Choose Document and then Add Watermark & Background. The Add Watermark & Background

dialog box that displays offers a number of options for creating these graphic effects. Before diving into the various settings, however, it's a good idea to specify the source file for the graphic. To do so, click the Browse button in the Source Page section. In the Open dialog box, navigate to where your previously converted PDF graphic is located and then double-click it. After you've specified a graphic file to use, Acrobat conveniently displays how it will look in the Preview



A background graphic can be an effective yet relatively subtle means of drawing attention to your document's main purpose.

section of the dialog box. You can use this section to preview other revisions you make in the Add Watermark & Background dialog box.

Choose An Option, Any Option

Now let's look at some of the other options available in the dialog box. In the Type section, indicate if you want to create a watermark or background. Additionally, check (or clear) the boxes for Show When Displaying On Screen and Show When Printing, depending on when you want the image to display.

You can also display the graphic on all the document's pages (the default) or

choose specific ones. To do this, choose between the All Pages or Specify Page Range options in the Page Range section.

Acrobat also gives you control over the graphic's appearance in the document. For example, you can specify how the graphic should be lined up in relation to the document's margins. To do this, choose options from the drop-down lists for Vertical Alignment and Horizontal Alignment.

Another option is to change the rotation of the graphic on the page. This option works well for watermark graphics that "stamp" a message (such as "Approved") on top of a page's text. To rotate a graphic, you can click the Rotation up or down arrows or simply type the percentage you want in the Rotation box.

You can also change the opacity of the image, which helps create various effects. For example, if an image is too dark in relation to text, it may be distracting. Lowering the opacity will create a fainter image and help the reader focus on the text message. To change the opacity, drag the Opacity slider bar. When you're finished specifying options in the Add Watermark & Background dialog box, click OK.

Revise At Will

Finally, you're not stuck with your original settings for a watermark or background graphic. If you later decide to make revisions, simply reopen the Add Watermark & Background dialog box. Specify your modifications (such as replacing one graphic image with another) and then click OK. ■

by Linda Bird



Adobe Photoshop CS

Be A Masking Marvel

Many Photoshop techniques share a common foundation: the mask. Masks hide or reveal selected areas of an image. Hidden areas are not affected by subsequent image editing. A mask can also give you more control when you're using other Photoshop tools, such as dodging and burning.

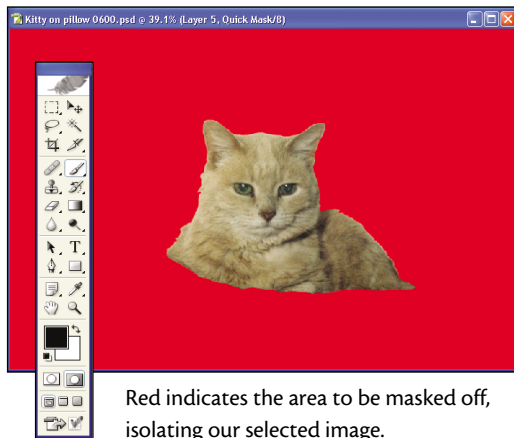
There are almost as many ways to create masks as there are to use them. We will look at one of the simpler methods, the Quick Mask. A mask you create with this process can have wispy, delicate edges; sharp, detailed edges; or anything in-between. This flexibility comes from the brush tool. Brush size and hardness determine whether the boundary between the masked and unmasked areas is

Prepare The Image

Images of animals or people are good choices for practicing this technique. We will use a mask to isolate a cat resting on a pillow, so we can use him in other photos. This is a common way to create a variety of images from a single starter image.

For Quick Mask to work correctly, you must set the foreground color to black and the background color to white. Click the small default Foreground/Background icon on the Tools palette.

Use the Lasso tool to draw a border around the area you want to keep. Don't try to get too close to the edges; that's a job for the Brush tool and the Quick Mask. The purpose of using the lasso tool is to avoid the need to paint in large areas of the mask.



Red indicates the area to be masked off, isolating our selected image.

crisp or soft. A brush with 100% hardness will draw a distinct edge; a brush with 1% hardness will draw a feathery edge. Large brushes (100 pixels or more) can fill in large areas at a time; small brushes (10 pixels or fewer) allow you to work in detailed areas.

burning. To use Quick Mask to cut out an image, set the Opacity to 100%, and click OK. Most of the image will be painted in red, with a small section between the lasso and the target image that you will mask out with the Brush tool.



The Brush Tool

Select the Brush tool, and move your cursor onto the canvas. Right-click the image, and use the sliders to set brush size and hardness. Click within the canvas to accept your settings. Carefully draw an outline of the image. When the image is completely outlined, adjust brush size and hardness to fill in any remaining areas.

If you make a mistake, you can erase part of the mask by inverting the Foreground/Background colors. Painting with the brush will remove the red mask. When you've removed your mistake, reset the Foreground/Background colors and finish painting the mask.

The Final Steps

Click the Edit In Standard Mode icon in the Tool palette. Your image will display in normal mode, without any red mask visible, and the target area will be surrounded by a marquee-like outline.

Click Edit and select Copy to move the selected part of the image to the clipboard. Click Edit and select Paste to paste the item into a new layer. Right-click the background layer in the Layer palette, select Delete Layer from the pop-up menu, and click OK. Click File and select Save.

Cut Once, Use Often

You now have an image that you can reuse as often as you like in other images, to create a collage, or to combine friends, family, or pets into a single image. ■

by Tom Nelson
and Mary O'Connor

Intuit QuickBooks Pro 2005

Create & Print Customized Budget Reports

Last month we showed you how to create a budget. This month we'll help you create and print customized budget reports. You can access the report templates by opening the Reports menu and selecting Budgets. A context menu opens with four options: Budget Overview, Budget vs. Actual, Profit & Loss Budget Performance, and Budget vs. Actual Graph. Each report offers a slightly different perspective on the same information.

Budget Overview. This report is a presentation of the budget you created using the "Intuit QuickBooks Pro 2005" article last month. When you select the Budget Report option, a Budget Report dialog box appears. Select your budget from the drop-down menu and click Next. In the

Modify Report button near the top of the report. On the Display tab of the resulting Modify Report dialog box, you can specify the date range for the report (Last Fiscal Year or Custom, for example), the column layout (such as Month or Quarter), and a sorting option (such as alphabetically or by total). Open the Filters tab to further define which information you want to appear in your report.

You can refine the appearance of the report by tweaking the options contained on the Header/Footer and Fonts & Numbers tabs. Click OK to review your customized budget report.

Profit & Loss Budget Performance and Budget vs. Actual. These are arguably the most useful reports QuickBooks offers. Why? Because a budget overview is merely numbers on a page. Like the posted speed limit on a stretch of highway, a budget overview announces what is expected but does not necessarily reflect reality. The Profit & Loss Budget Performance report and the Budget vs. Actual report, on the other hand, are like radar guns that measure the precise rate at which traffic is moving. Each report presents this information in a unique way, with the former showing

actual numbers next to budgeted numbers and the latter showing exactly how much (either as a dollar figure or percentage) you are over or under budget in each category.

As with the Budget Overview, you can customize each report by clicking the Modify Report button and specifying

a particular date range, layout option, filter, and other preferences.

Budget vs. Actual Graph. This is not a report but rather a visual illustration of budget performance to date. By default the graph shows actual profits and losses by month and by account for the fiscal year to date. You also can view graphs that track performance by job or class. You can change the date range for any graph by clicking the Dates button.

Save & Print

After configuring a report to your liking, click the Memorize button to save a permanent copy. (This option is not available for the Budget vs. Actual Graph report.) You can access the report in the future by opening the Report Navigator, clicking the Memorized link near the top of the page, and selecting the report name from the resulting list.

We also advise printing a copy of each report you create. Simply click the Print button, and in the resulting dialog box, specify a printer destination, page orientation, and page range for the current print job. Click the Preview button to see how the report looks on paper. If you like what you see, click the Print button. Otherwise, close the Preview window and revise the print settings accordingly.

QuickBooks gives you the option of emailing the report or exporting it as an Excel spreadsheet, as well. Click the Email or Export buttons and follow the instructions to complete each process. (The Email and Export options are not available with the Budget vs. Actual Graph option.) ■

by Jeff Dodd

	Budget	Jan	Apr 95	YTD Budget	Annual Budget
Initial	0.00	0.00	0.00	0.00	0.00
Travel	100.00	100.00	100.00	100.00	100.00
Telephone	100.00	100.00	100.00	100.00	100.00
Travel & Tel	200.00	200.00	200.00	200.00	200.00
Total	1,200.00	1,200.00	1,200.00	1,200.00	1,200.00

For quick customization, configure the Dates and Columns fields near the top of the report instead of opening the Modify Reports dialog box.

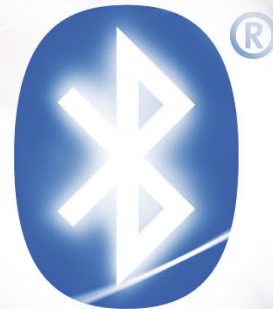
resulting dialog box, specify the Account By Month layout option, click Next, and click Finish.

By default the overview report provides a generic month-by-month recap of your budget for the fiscal year to date only. To customize the report, click the



Bluetooth

You Have It; Now What?



For mobile phones, Bluetooth is quickly becoming ubiquitous. More than 30% of the mobile phones sold in 2004 incorporated Bluetooth technology, and analysts predict that figure will rise to 50% this year; 70% by 2007. Consequently, if your company has not yet handed you a Bluetooth-enabled phone, expect that it might do so shortly. Additionally, the next mobile phone you purchase personally may offer Bluetooth technology.

Rather than let Bluetooth become another unused feature, you can embrace this useful technology for everything from hands-free communication to PC synchronization. In this article we'll tell you what Bluetooth can do and show you how to get set up and running with Bluetooth on three popular mobile phones.

Blue Is Better

Bluetooth, which first appeared on the horizon in 1998, is a radio-based wireless technology that lets you connect multiple, compatible devices at a range of approximately 30 feet. Unlike the IrDA (Infrared Data Association) standard, Bluetooth does not require a direct line of sight. You can keep your Bluetooth-enabled mobile phone in your pocket, your purse, or your desk drawer, and other Bluetooth devices can still find it and make a connection.



(For more on the specifics of Bluetooth technology, refer to the "Bluetooth Boot Camp?" article on page 44.)

Like Harald Blatand (aka Bluetooth), the Danish king who united Scandinavia and provided the name for the technology, Bluetooth is all about unity. Each successive specification is backward-compatible with those before it, and the presence of a universal standards group means there are no competing versions from which consumers must choose. Overall, Bluetooth is easy to implement and use, even in PCs thanks to Windows XP's native support for the technology (Service Pack 2 only).

Bluetooth has drawbacks, the foremost of which are speed, distance, and security. The basic Bluetooth specification is about one-tenth the speed of 802.11b, its wireless competitor, and communicates at more than one-tenth the distance. However, these impediments will likely go away. Updated, faster specifications, a partnership with the developers of the super-high-speed UWB (Ultra Wideband) technology, and new scenarios that transmit Bluetooth

The Motorola MPx220 is a capable flip phone that offers Windows Mobile's downscaled versions of Outlook, Internet Explorer, and other applications, plus video capture, and MP3 player, and a 1.23-megapixel camera.



With its stylus, flip-out keyboard, and oversized display, the Sony Ericsson P910a is by far the most PDA-like of the three phones we tested, and it includes an in-flight mode that turns off the phone and Bluetooth but lets you use the PDA features. Such functionality comes at a price—even in basic phone mode, it is complicated to operate and cumbersome to use one-handed.

signals over antennas should eliminate speed and distance concerns within the next year or so.

A bigger issue is Bluetooth's security. Researchers found numerous vulnerabilities in Bluetooth's design that enable hackers to send Bluetooth users

messages that are unsolicited (Bluejacking), gain unauthorized access to stored information (Bluesnarfing), and take over the mobile phone to dial calls (Bluebugging). Nevertheless, you can sidestep these attacks if you are careful. (For more on mobile phone vulnerabilities, see "Cell Phone Antivirus Protection" on page 80. For help protecting yourself against invasion, read on.)

What Can Blue Do For You?

When you embrace Bluetooth, a world of cable-free computing opens for you. With a Bluetooth-enabled mobile phone, for example, you can (wirelessly) talk using a headset, send data to a

printer, sync contacts and files with your PDA or PC, log onto a broadband network, and send or receive faxes.

In the next few years as the technology matures and more inexpensive Bluetooth devices enter the market, we will likely find ourselves streaming or controlling multimedia or slide presentations via Bluetooth; transferring songs between our homes, cars, and mobile MP3 players; and performing all sorts of tasks that most of us only dream of now.

Unfortunately, not all Bluetooth devices are created equal. Each device implements one or more profiles, which define its functionality within a Bluetooth PAN (personal-area network). Available profiles include DUN (dial-up networking), FTP, HS (headset), and FP (fax profile). If you want your mobile phone to have particular capabilities and you have any choice in its selection, compare models to ensure you get what you want.

Currently, there are numerous companies that make Bluetooth-enabled mobile phones, but three in particular are market leaders: Motorola (www.motorola.com), Nokia (www.nokia.com), and Sony Ericsson (www.sonyericsson.com). None of these companies would



The Nokia 6620 is very easy to navigate with one hand and offers multimedia and camera options similar to those of the Motorola and Sony Ericsson. Unfortunately, it lacks the breadth of PDA-style applications found with our two other contenders, and its Symbian OS has been the target of several virus attacks.

Upshot

- Bluetooth-enabled devices are becoming more prevalent. Analysts are predicting that by 2007, more than 70% of mobile phones sold will include Bluetooth technology.
- Bluetooth, like Superman, can "see" through walls and other barriers. Unlike infrared remote controls, Bluetooth devices can connect even if there's no line of sight between them.
- When mobile professionals look like they're talking to themselves, chances are they're using the magic of Bluetooth to chat on the phone with a small wireless headset.

confirm their particular "best seller," but each gave us a recommendation for a popular Bluetooth model that would be appropriate for business users. These are the Motorola MPx220, the Nokia 6620, and the Sony Ericsson P910a, all of which are smartphones (cell phones that incorporate an OS that can run applications similar to those you find on a PDA).

First Things First

All mobile phones require a battery and a SIM (subscriber identity module) card. The battery powers your phone; the SIM card, which is provider-specific, lets you connect with a cellular network such as Cingular or T-Mobile. SIM cards are thumbnail-sized, flat, pieces of plastic with metal strips on one side. If your phone does not come with the SIM card and battery pre-installed, you need to install them.

1. Turn your phone over, depress the release mechanism, and then slide the back panel off. The release lever is a button (on our Motorola and Nokia models) or marked area (on our Ericsson smartphone) on the back of the phone.

2. Insert the SIM card. The cards slide in on a horizontal plane, flat side up (like a floppy diskette into a floppy drive on a PC).

On the Motorola MPx220: Slide the card into the small indentation just above the battery well (metal strips down; cut corner at the bottom right) until the card is firmly seated.

On the Nokia 6620: Locate the plastic

cover that partially obscures two square depressions in the battery well and slide it down. Place the SIM card in the upper depression (metal strips down; cut corner at top left). Slide the plastic cover up as far as it will go.

Slide the multimedia card into the other depression, moving left to right, (cut corner at bottom-right corner, the words Multimedia Card facing out). Hold down the card and slide the plastic cover until the row of horizontal dots at the center of the cover match those on the phone.

On the Sony Ericsson P910a:

Place the SIM card (metal strips down; cut corner at top left) just above the SIM slot at the bottom of the battery well. Slide the card down onto the slot so that it goes under the two metal clips on either side of the slot and seats firmly.

3. Place the battery into the well so the metal sensors on the battery match those on the phone. There will only be one correct orientation for this position. Replace the cover. You need to charge the phone (at least four hours) prior to use.

Activate Bluetooth

Setting up Bluetooth to work with a headset, printer, or other device is easy. You can enable Bluetooth right away or wait until you become familiar with your phone. We do not have room here to discuss how basic features work on each phone, but the phone's users guide (and in the case of the Motorola, the companion



To work with other devices, your mobile phone's Bluetooth settings must be turned on. For other devices to find it, the phone must be set to Discoverable, Visible, or Shown To All. Shown are the Bluetooth settings for the Nokia 6620.

Get More Online

The Official Bluetooth Wireless Info Site
www.bluetooth.com

Bluetooth 2.0 To Offer Three Times The Speed
www.radio-electronics.com/info/wireless/bluetooth/bluetooth_edr.php

How Bluetooth Got Its Name
www.bluetooth.org/bluetooth/landing/btname.php

The Bluetooth Weblog
bluetooth.weblogsinc.com

CD), will give you the information you need for setting up Bluetooth.

If possible you should set up a permanent linking, called a pairing, between your mobile phone and each peripheral Bluetooth device. Paired devices can find each other even when you set Bluetooth to appear as hidden to prevent hackers from discovering your phone. The instructions that follow should work with most mobile phones. We have included specific details, where necessary, for the three phones we tried out.

Before you start, check the documentation that comes with the secondary Bluetooth device to see if the passcode (also called passkey) is preset. This code prevents other devices from assuming the identity of the device and connecting without authorization. If you are using your smartphone to connect to a PC, check out "Communicate With Bluetooth" on page 48, for further information.

1. Turn on your smartphone, locate Bluetooth Settings, and set Bluetooth to On.

Motorola MPx220: Open the Windows Mobile Start menu, select Settings, and then select Bluetooth. Press the Right arrow key on the phone's keypad to set Bluetooth to On.

Nokia 6620: Press the menu button, select Connect, and then select Bluetooth. Use the navigation button on the phone to turn Bluetooth on.

Sony Ericsson P910a: Flip open the phone and tap (using the stylus) Control Panel. Tap the Connections tab, tap Bluetooth, and then tap the On radio button.

If the steps that follow do not let you successfully pair the devices, the secondary device may need to discover your mobile phone. In that case, set Bluetooth Settings to Discoverable (Motorola), Shown To All (Nokia), or Visible To Other Devices (Sony Ericsson), and refer to the other device's documentation to perform the pairing.

2. If you are prompted to name your phone, do so. This is the name other devices will use for your phone.

3. Make sure the other Bluetooth device is turned on and that Bluetooth

Bluetooth & Company Policy

After five years of speculation, Bluetooth appears to be hitting the mainstream. Factors including reduced price and native support in Windows XP Service Pack 2 are giving Bluetooth serious momentum. Early-adopter giants such as UPS and FedEx have deployed Bluetooth in limited scenarios which include such things as package sorting and driver-to-van communication.

In addition, employee adoption rates for wireless technologies, including Bluetooth, are strong across the board. According to a 2005 study by AIIM (Association for Information and Image Management) and Kahn Consulting, 81% of companies say their employees use wireless-enabled handheld devices for business.

Nevertheless, the majority of companies have not yet incorporated wireless technologies into company policy. According to the AIIM/Kahn study, only 35% of companies have instituted formal policies regarding the use of these wireless devices. Industry analysts such as the Gartner Group have warned that failure to organize a structured policy and training environment for Bluetooth is a huge oversight.

When users are careless, Bluetooth can be extremely insecure, and unsolicited attacks of Bluetooth devices (particularly cell phones) are on the rise. Compounding the problem, the use of high-gain antennas can potentially expand the range for file transfer via Bluetooth to 1 kilometer (over a half-mile). ■



FedEx is using Bluetooth to give drivers remote access to printers and PCs set up inside their vans.

settings, if available, are set to On and Discoverable or Visible.

4. In Bluetooth Settings, add the device to your paired devices list.

Motorola MPx220: Select Menu and then Devices. Then select Menu again and New.

Nokia 6620: Push the navigation button to the right to select the Paired Devices tab. Click Select and choose New Paired Device.

Sony Ericsson P910a: Tap Devices and tap Add.

The phone will search for all Bluetooth devices within range.

5. After the phone displays the non-paired device, select the device. The mobile phone will prompt you to enter the passkey. If the second device does not have a preset passkey, you can create your own. You will also need to enter the passkey on the second device.

6. If the option is available, enable an automatic connection. Look for

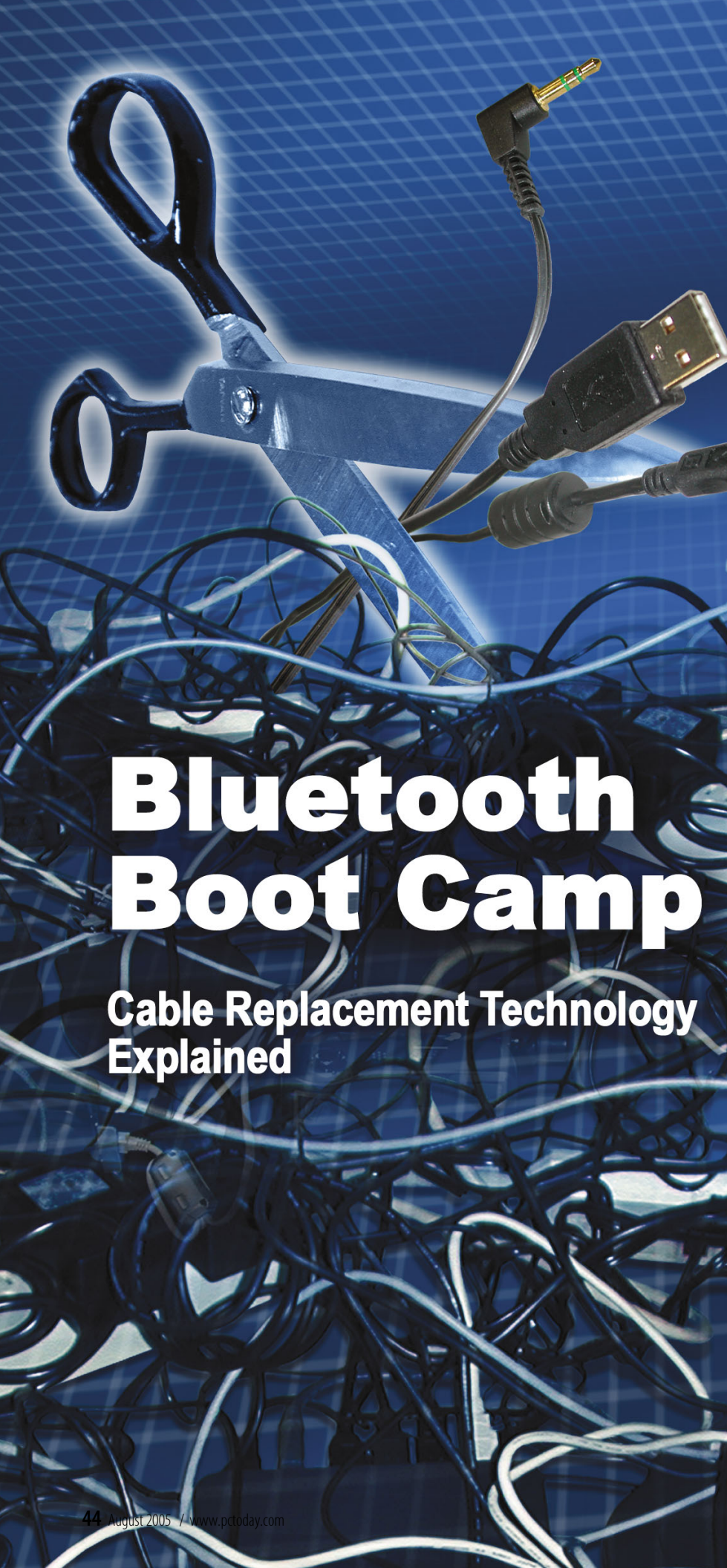
the Authorized setting in the Nokia 6620 or the Allow To Connect Without Confirmation checkbox in the Sony Ericsson P910a.

After pairing is complete, your devices will work together any time they come into range. (If you have not enabled automatic connection, you must accept the connection first.)

7. Return to Bluetooth settings and disable discoverability. Change the setting to On if you are using the Motorola MPx220; change the setting to Hidden on the Nokia 6620; deselect the Allow To Connect Without Confirmation checkbox on the Sony Ericsson P910a.

For the highest level of security, turn Bluetooth off when you are not using any peripheral devices. However, this disables your Bluetooth connection, even with paired devices. ■

by Jennifer Farwell



Bluetooth

Boot Camp

Cable Replacement Technology Explained

While the 802.11b wireless networking standard (also known as Wi-Fi) continues to take the world by storm, another wireless standard called Bluetooth is making an impression. It's happening in large part due to the recent proliferation of small digital devices, such as PDAs and MP3 players, which benefit from wireless connectivity.

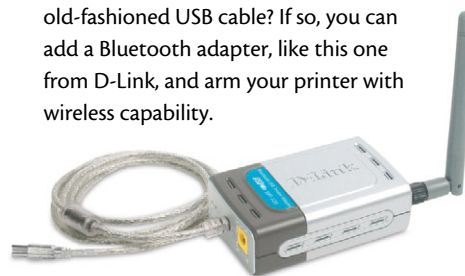
So the next time you go shopping for a new digital tool, don't shrug or offer blank stares when the salesperson mentions Bluetooth capabilities because this wireless standard could change your digital world in a big way.

Bluetooth Primer

You've heard a lot about wireless networking, a generalized technology that lets you create a home or office LAN (local-area network) using radio waves. Many people confuse Bluetooth with these kinds of networking standards, but the reality is that Bluetooth is a different technology with different aims.

In short, Bluetooth is a short-range radio frequency standard that's designed

Did your printer come with just an old-fashioned USB cable? If so, you can add a Bluetooth adapter, like this one from D-Link, and arm your printer with wireless capability.



to replace cables. It's not meant to be a long-range, high-bandwidth beast like Wi-Fi; instead, Bluetooth lets you efficiently and easily transfer blocks of data to and from small digital devices, such as PDAs, keyboards, cameras, printers, headsets, speakers, cell phones, and much more. Setting up communications between these devices lets you create a PAN (personal-area network) that works in just your small space of the world.

When compared to LAN wireless standards, Bluetooth is relatively toothless, with a low data transfer rate of only about 1Mbps (megabits per second) and

Bluetooth You Can Wear

The \$499 Audex jacket, available in late 2005 from Motorola and Burton, has a control panel on the sleeve that lets you answer and place phone calls, check caller ID, or send music to the hood's integrated headphones. There's also a microphone integrated into the collar, so you don't have to hold your phone to speak to your friends. ■



just enough radio power to work in a range of about 30 feet. That's not much compared to Wi-Fi, which in an optimal environment lets you transfer data at about 11Mbps at a range of about 300 feet. Still, what it lacks in power and speed, Bluetooth makes up for with other traits.

One of Bluetooth's greatest strengths is the ease in which it creates a connection between two Bluetooth-capable devices. Unlike Wi-Fi, which often requires you to manually locate a radio signal and then authenticate your identity, to create a Bluetooth PAN, all you have to do is bring the two products within range of each other. Then the wizardry behind Bluetooth automatically decides which device should be in control. For example, your PDA would establish control over a printer, letting you send documents or images for quick printing.

Cost and space efficiency are two more Bluetooth strengths. The receiver/transmitter components that make up a Bluetooth unit cost less than \$20, so they don't add lot to the price of the devices you use. What's more, these radio components are so tiny that creative product engineers can squeeze them into a multitude of devices without breaking a sweat. And just about any device that uses cables or infrared light to transfer data can also use an add-on Bluetooth adapter.

Finally, Bluetooth's lack of range serves a serious purpose. Because the signals extend only about 30 feet, the possibility of interference with other devices drops significantly. Plus, Bluetooth uses frequency hopping to rapidly cycle through different radio frequencies, preventing interference with baby monitors, garage door openers, and other products that share the 2.45GHz frequency.

Security concerns. If you think Bluetooth sounds too cutesy to use any sort of security, you're wrong. The

Bluetooth standard uses data encryption algorithms, as well as a variety of authentication options.

That doesn't mean Bluetooth security is perfect. Smart hackers can use their own radio devices to snag contact and other personal data from your phone or PDA. In the right situations, a hacker could even covertly turn your Bluetooth-capable phone into a listening device and eavesdrop on your conversations. And other tech-savvy users could track you by following your Bluetooth signal.

Fortunately, many such hacking schemes require a great deal of technical knowledge, a lot of motivation, and, in some cases, very expensive or difficult-



You don't have to buy any fancy equipment to add Bluetooth connectivity to your PC. Linksys makes a Bluetooth adapter that plugs into your USB port.

to-construct hardware. In addition, only certain models of phones and other devices are particularly vulnerable to attack. Before you buy a new Bluetooth device, perform a few Web searches to see if the product is susceptible to security attacks and whether there are fixes to make your data more secure.

With Teeth

As Bluetooth becomes more popular, it will also get faster and more secure. In late 2004, the Bluetooth Special Interest Group approved an updated version called Bluetooth EDR (Enhanced Data

Rate). Bluetooth EDR transfers data at about 3Mbps, uses less power than old Bluetooth components, and is also backward compatible with older Bluetooth products. Products with Bluetooth EDR began shipping to retail outlets this year.

Bluetooth engineers have even bigger plans for the standard in 2006. They hope to make Bluetooth capable of multicasting, which basically means that one Bluetooth device will be able to send data to multiple devices without the need to repeat the message over and over again, a tactic that conserves bandwidth and computing power. What's more, Bluetooth developers hope to extend the standard's range by 10 times, to approximately 300 feet.

Engineers also plan to continually improve Bluetooth security. This year, the newest versions of Bluetooth will use much more detailed alphanumeric combinations to strengthen encryption efforts. And in 2006 Bluetooth should be sealed tightly enough so that when you put your device in nondiscoverable mode, even advanced hackers won't be able to locate and access your hardware.

Get The Blues

The next time you find yourself wrestling with the wires of your MP3 player or wishing for a better way to transfer data to a co-worker's PDA, remember that Bluetooth can solve all of these problems and more. If you've been putting off investing in Bluetooth technology because you were leery of this technology, now's the time to take the plunge. ■

by Nathan Chandler



Internet Access With Bluetooth

Connect To The Web

With the advent of low-cost and increasingly common Wi-Fi hotspots in hotels, coffee shops, airports, and other facilities, taking your work home or on the road is quite easy. Coupled with today's laptop PCs, these facilities let employees stay connected to their offices and the Internet at broadband speeds for little or no cost.

What if you need to get online with your computer but these facilities aren't available? We'll explain how to access the Internet and access email using your Bluetooth-enabled PC and mobile phone or PDA. After you understand how to accessing the Internet, we suggest you check out "What's Next?" on page 50 for things you can do with Web access on a Bluetooth PDA or smartphone.

Necessary Components

If your laptop doesn't have Bluetooth, you can purchase an inexpensive Bluetooth PC card or USB adapter. Don't automatically assume your laptop has Bluetooth because some manufacturers don't include the technology as a standard in their computers. However, some companies sell custom kits that include the necessary adapter and software.

Many mobile phones currently on the market come with Bluetooth capabilities built-in. With a Bluetooth-enabled phone, you can use a wireless headset to answer your calls or check voice messages. You can also move your email, contact list, and calendar information between your phone and your notebook or desktop PC.

To make an Internet connection using your Bluetooth-capable mobile phone, you can use your phone's regular network and dial your ISP's connection number. The cost of this option will be about the same as it would cost you to make a normal mobile call, but the connection is slow. A second option is to connect via your mobile carrier's GPRS (General Packet Radio Service) or EDGE (Enhanced Data For GSM [Global System for Mobile Communications] Evolution) data network. This is considerably faster, but then you have to pay extra for the service. Check with your mobile phone's service provider for more details.

Bluetooth Setup

Accessing the Internet using your mobile phone and notebook is simple if you have the components indicated above. The following steps apply to computers running Windows XP with Bluetooth support added. Unlike earlier Windows versions, WinXP Service Pack 2 includes native support for Bluetooth. If you have WinXP SP1 and can't or don't want to obtain SP2, you can follow the instructions in Microsoft Knowledge Base article 323183 (support.microsoft.com/default.aspx?id=323183) to add Bluetooth support to WinXP. You can follow similar steps if you're using an earlier Windows version, provided that you install the software that comes with the Bluetooth adapter. Follow these steps:

Step 1

If your computer doesn't have integrated Bluetooth capabilities, you need to install a Bluetooth adapter as per the manufacturer's instructions. In most instances you will need to install the software on



the included CD-ROM before you connect the adapter to your USB port.

Step 2

Set up your phone to search for Bluetooth devices; steps will vary from phone to phone, so check your user's manual for specific instructions. After you locate a Bluetooth device, you'll see the Bluetooth icon light up on your phone to indicate it's ready to connect to other devices via Bluetooth.

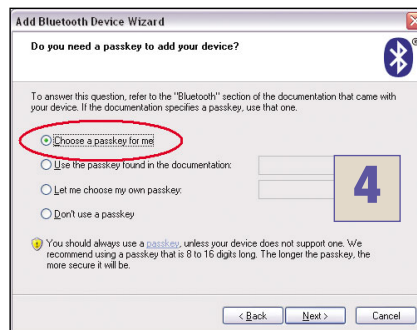
Step 3

Next, double-click the Bluetooth icon in your computer's Windows Taskbar while the phone is searching. You will

need to place the phone and the PC in Search Mode for them to connect to one another. Click the Options tab in the Bluetooth Devices dialog box and select the Turn Discovery On checkbox. Click OK. Your computer will locate your mobile phone and recognize it as the correct model number within moments.

Step 4

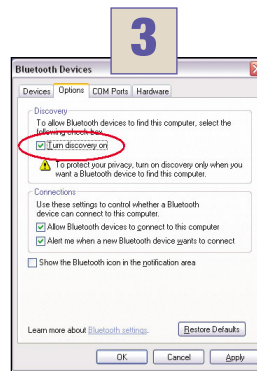
Click Choose A Passkey For Me in the Bluetooth Devices dialog box and click Next. Your phone will light up and recognize the passkey from your PC. Enter the



passkey that Windows displays into your phone using its numerical keypad. The Completing The Add Bluetooth Device Wizard will appear. It tells you the Bluetooth device was successfully connected to your PC; your PC will also appear in your mobile phone's Bluetooth device list. If the connection fails, click the wizard's Back button and try it again, entering the passkey on the keypad once more.

Step 5

Open your notebook's Control Panel and select Internet Options. Select the Connections tab in the Internet Properties dialog box and click the Setup button. The New Connection Wizard walks you through setting up a new Internet connection. Click the Next button. When the wizard advises you to choose a network connection



type, select the Connect To The Internet radio button and click Next. When the wizard asks how you want to connect to the Internet, select the Set Up My Connection Manually radio button, click Next, and then select the Connect Using A Dial-Up Modem option in the next dialog

box. Click the Next button again.

Step 6

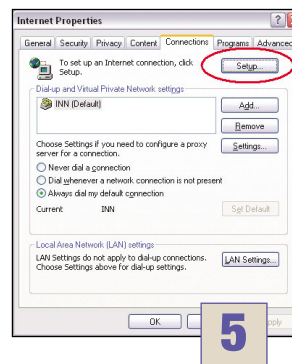
In the next few New Connection Wizard dialog boxes, you need to enter the name of your ISP, its phone number, and a username and password for your ISP. You need the correct login information from your ISP here. And make sure to choose your Bluetooth modem and not your laptop's internal modem as the default for this new connection.

Make The Connection

After you complete all six steps, you'll be able to access the Internet with your laptop via your mobile phone, with the phone acting as the modem. To connect to the Internet, double-click the new icon you created in the Network Connections dialog box previously.

If you find the connection speeds too slow, you can sign up for a data plan that uses your carrier's GPRS or EDGE data network. This usually adds a monthly fee of around \$20 per month, but it could be

worth the cost if you find yourself doing this often. For the ultimate in mobility, you can skip using your phone entirely, buy one of the fast EVDO cards that are becoming available, and sign up for a data plan. Although pricey at around \$80 per month, EVDO cards give you broadband speeds (or faster) virtually anywhere you can get a mobile signal for true wireless bliss. ■



by Jamie Lendino



Communicate With Bluetooth

How To Email

Do you hate the hassle of typing lengthy text (SMS [Short Message Service]) or email messages on your smartphone or PDA? When you are on the road, do you need to access the Internet on your notebook and there is no available connection or the only available dial-out number is long distance?

If your mobile device and notebook support Bluetooth, you can connect them and potentially resolve these issues. Using a mobile-to-notebook Bluetooth link, you can exchange files between the two units, which gives you the convenience of typing messages on your notebook and sending them via Bluetooth to your mobile device for delivery. Depending on your mobile's capabilities, you may be able to dial the Internet from your notebook by using your mobile as the modem.

The instructions that follow assume your notebook has Bluetooth capabilities and dial-up Internet access and is running Windows XP Service Pack 2. (Instructions for earlier Windows versions are similar.) If your notebook isn't Bluetooth enabled, you can buy a USB Bluetooth adapter for about \$40.

An Attractive Pair

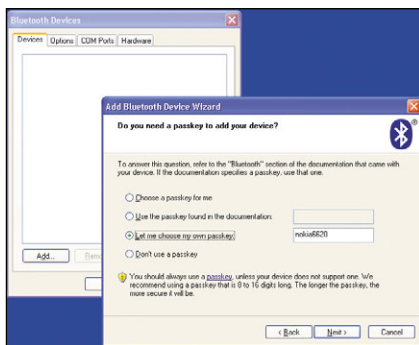
Before your Bluetooth devices can find each other, you need to link them. This process, called pairing, is easy to accomplish, as long as the devices are within about 30 feet of each other and you have already turned on Bluetooth on your mobile device and set it to Visible, Discoverable, or something similar. Instructions vary from one device to the next.

Click the Bluetooth icon in your notebook's System Tray and select Add A Bluetooth Device. If you don't see the icon, open Control Panel, double-click the Bluetooth Devices icon, select the Devices tab in the resulting dialog box, and click Add. In the Bluetooth Device Wizard, select the My Device Is Set Up And Ready To Be Found checkbox and click Next.

After WinXP locates your mobile device, select it and click Next. When prompted for a passkey (a code that helps secure your connection), provide one of your choosing or let WinXP generate one for you. Click Next. Your mobile device



Click the Bluetooth icon in your System Tray and select Add A Bluetooth Device. When the Add Bluetooth Device Wizard opens, select the My Device Is Set Up And Ready To Be Found checkbox and then click Next.



After Windows XP locates your mobile device and you select it, the wizard will prompt you to create a passkey.

will display a connection request and instruct you to enter the passkey. You have three minutes to do this before WinXP deems the device unresponsive.

If WinXP displays a message saying it cannot connect or that the passkey was rejected, check your mobile device's documentation for a preset passkey and repeat this step. You may also need to click the Options tab (in the Bluetooth Devices dialog box on your notebook) to enable discovery and turn the connection on for your notebook. If prompted to name the notebook connection, you can use the notebook's network or Bluetooth name or any other name.

Pairing is complete when you receive a message from the device confirming the connection and when the notebook's Bluetooth Devices dialog box displays the device. For security purposes, change the Bluetooth settings on your mobile device from Shown To All,

Visible, or Discoverable to Hidden or something similar.

Get Connected

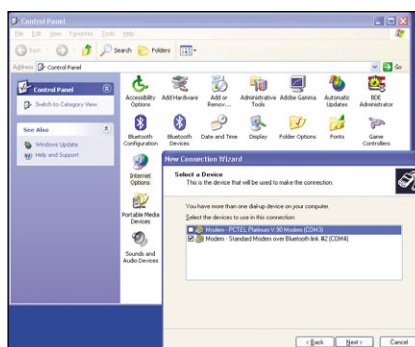
Now try using your mobile device to connect to the Internet. You will perform all the following steps on your notebook.

Select your device in the Bluetooth Devices dialog box and click the Properties button. Click the Services tab in the Properties dialog box. If dial-up networking is a listed service, select the DUN (dial-up networking) checkbox. If you do not see a dial-up networking option, you cannot use your mobile device to connect your notebook to the Internet without advanced setup or third-party programs. We won't discuss those options at this time, so you can skip ahead to the "Using Your Connection" section.

Return to the Start menu and select Control Panel. Double-click Network Connections. In the Network Tasks pane at the left, click Create A New Connection. Click Next. Select the Connect To The Internet radio button and click Next. Select the Set Up My Connection Manually radio button and click Next.

When prompted, provide your ISP's dial-in phone number and login information. The wizard will also prompt you to select a modem; choose Standard Modem Over Bluetooth Link. Right-click the connection on your Desktop and click Connect. In the Connect dialog box, provide your username and password and click Dial.

When WinXP connects to the Internet, a connection icon will appear in your



During dial-up connection setup, select the Bluetooth modem as your dial-up device.

System Tray. If you are unable to make a connection, double-click the Connection icon on your Desktop and click the Properties button. Ensure the Bluetooth modem is selected and the numbers are correct. You may also need a special modem initialization string from your mobile device provider. When you are finished, right-click the Connection icon on your Desktop and select Disconnect.

Use Your Connection

After you pair your mobile device and notebook, you can send files to the mobile device. You can also forward files on the mobile device to your notebook for further processing.

To send a message to your mobile device, type the message on your notebook in a program, such as Microsoft Word, and save it as a text file. Right-click the Bluetooth icon in your notebook's System Tray and select Send A File. Make sure your mobile device is selected or click the Browse button to locate it.

Next, click the Browse button to locate the file you want to send. When your mobile device asks if you want to accept the transfer, choose Yes. Open and save the message. You can now use the sending options on your mobile device to forward the message as a text message. Depending on the device, you may also be able to send the message as an email.

To receive messages on your notebook, open the file on your mobile device that you want to send to your notebook. Right-click the Bluetooth icon on your notebook and select Receive A File. WinXP will wait for the connection.

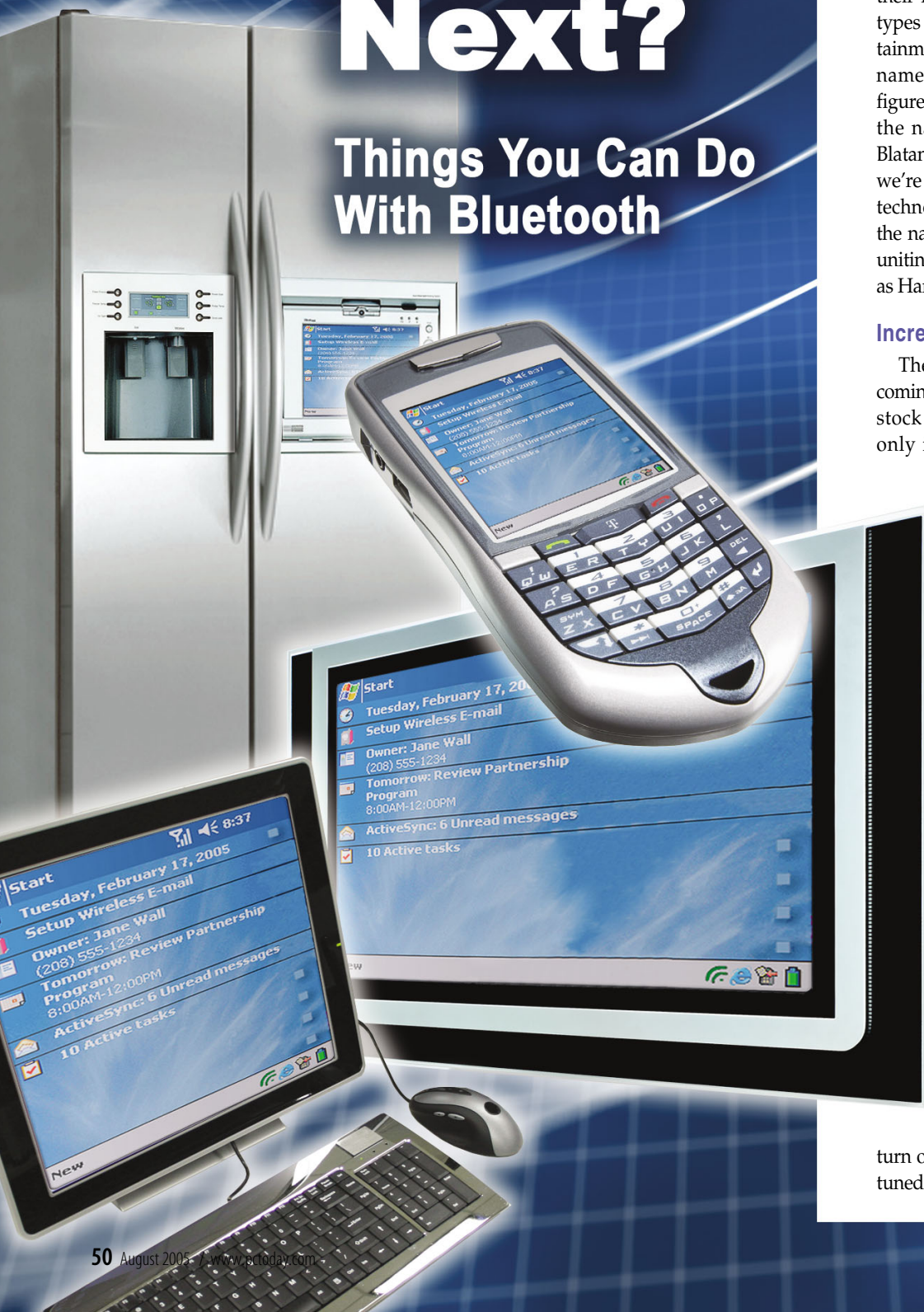
On your mobile device, open Options for the file and select Send. Select Bluetooth as the sending method and select your notebook as the device. Your mobile device will send the file, and your notebook will prompt you to save the file.

After you link your mobile device and notebook via Bluetooth, you can explore other uses for the hookup. Check the documentation that came with your Bluetooth devices for more ways you can use the technology to enhance your mobile environment. ■

by Jennifer Farwell

What's Next?

Things You Can Do With Bluetooth



According to The Official Bluetooth Membership Site (www.bluetooth.org), the name for this now ubiquitous wireless technology came from a 10th century Danish king, Harold Blatand. Blatand was instrumental in uniting many of the warring factions of Scandanavia. The founders of the Bluetooth technology thought that since their invention would hopefully unite all types of electronics, from office to entertainment, it would be a fitting tribute to name it after this significant historical figure. What does all that have to do with the name, you ask? Well, in English, Blatand translates to "Bluetooth." Below, we're going to list just a few of the myriad technologies that have been affected by the namesake of the former ruler that are uniting the electronics community, much as Harold Bluetooth united Scandinavia.

Increase Your Home's IQ

The last thing you want to do when coming home from a business trip is to restock your refrigerator. Now available only in Japan, but coming soon to the United States is a line of smart appliances that are Bluetooth enabled. Your refrigerator has scanners inside that read the contents of the fridge and pass that information to your home computer over the Bluetooth network. If you want to cook yourself some beef stew when you get home but don't know if you've got enough beef, just ask the fridge. It has a meal material management function that keeps stock of the contents, alerts you if you don't have enough of an ingredient, and can also order the item from an Internet grocery store. Your refrigerator, washer, dryer, or microwave can also keep themselves healthy. The same line of Bluetooth-enabled products can also repair themselves or tell you where to call for repair services.

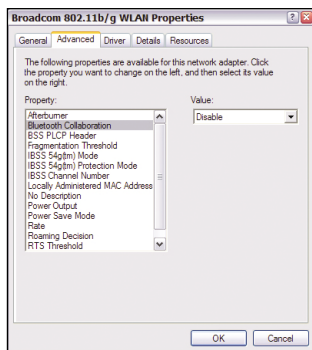
Imagine, as soon as you approach your house, the lights turn on, the door unlocks, and your TV is tuned in to the game. There is currently a

lot of research going into home security with Bluetooth. X-10, for example is a technology that interfaces household devices through the wiring of your house, but JazzBlue (www.hassnet.com) adds the versatility of Bluetooth. If you keep a small Bluetooth-enabled transmitter in your pocket (no bigger than a keychain), your home will respond to your approach: The doors will unlock, the TV will turn on, and the air conditioner will start to cool the house. Some might worry about security, but with its inherent encryption, Bluetooth is at least as secure as the physical key-and-lock system you already have.

Cut Cubicle Clutter

The days of a desktop or cubicle cluttered with wires is over. Thanks to Bluetooth, you can experience the freedom of a keyboard, mouse, or any number of other devices that can communicate with each other wirelessly, freeing up your desktop real estate. All you need is the appropriate hardware, usually in the form of a dongle (a small key device) that plugs into the USB port of your computer, and you can use any number of Bluetooth-enabled keyboards, mice, or 10-key pads from 50 yards away without a wire. You can also share high-speed Internet throughout your entire home or office without the risk of others pirating your connection. Bluetooth has an effective range of about 50 yards, keeping a rein on how far you're broadcasting your information.

Some laptop wireless cards are even starting to include onboard Bluetooth connectivity so that you don't need the dongle. Just activate the feature on your card and start using your Bluetooth-enabled devices. If your laptop has a Bluetooth adapter, either internal or external, it will be able to interact with your customer's Bluetooth projector so you can run the show from your own laptop.



Some wireless cards and notebook computers have integrated Bluetooth adapters, so you won't need to buy a special adapter to operate on a Bluetooth network.

Kiss Your Keyboard Goodbye

Senseboard Technologies (www.senseboard.com) has come up with a truly innovative, and frankly, very cool, Bluetooth application. The Senseboard is designed to replace the keyboard traditionally used as a data-input device. Traditional mobile keyboards are small, fragile, and often more of a hassle than they're worth, but up until now, if you didn't want to bother with the aggravation of using one, you were stuck with learning your PDA's text-recognition software. The Senseboard, however, removes all of the hassles of data entry on PDAs or any Bluetooth-enabled device by using a pair of small clips that fit over the palms of your hands to simulate a virtual keyboard on any flat surface. The Senseboard measures the movements of your fingers and uses an artificial neural network (artificial intelligence) to "learn" how you type. It then simulates the appropriate keystroke or mouse movement and sends the signal via Bluetooth to your PDA. If you don't have a Bluetooth device, the Senseboard will interface with your device via USB or serial port. ■

Synchronize Your Data

Tired of trying to keep your wireless phone's address book synchronized with your PDA and email address book? Bluetooth might be the answer. Newer wireless phones and PDAs are beginning to be released with Bluetooth connectivity. As soon as you walk in the door to your home or office, your PC's Bluetooth card recognizes your mobile device and begins to automatically synchronize your email addresses, phone numbers, and other contact information.



New from Motorola (www.motorola.com), the RAZR V3 allows you to synchronize your phonebook, pictures, and ring tones with your Bluetooth-enabled PC, as well as talk hands-free with an optional Bluetooth headset.

If you're worried about keeping both hands on the wheel and keeping in touch with your big client, there's a Bluetooth solution for you. Many of the same Bluetooth-enabled phones that allow you to wirelessly synchronize phonebook information on your PC and PDA will also allow you to go hands-free, truly without wires. All you need to do is enable the Bluetooth feature on your phone and purchase a Bluetooth-enabled headset. These wireless, hands-free sets usually just consist of an earpiece and microphone that clips directly to your ear.

Helping You Kick Back

Though still in its infancy, Bluetooth is poised to become the best thing to happen to electronics since Nicola Tesla built the first AC generator. Some day, we'll be able to walk into a hotel room across the world, and without lifting a finger, the TV will start playing our favorite program, the alarm clock will automatically reset itself to wake you at your normal time, and the refrigerator will order your favorite midnight snack. *Dank u Harold Blatand.* Thank you, Harold Bluetooth. ■

by David Miller

Everything's Coming Up Bluetooth

Stuff You Can Buy

Let's face it: Wires are old hat. They are cumbersome and take up valuable space, especially on the go. Thankfully, more and more these days, devices and connections are coming without the strings attached—literally. The most exciting technology enabling us to ditch the cords is Bluetooth, a short-range radio-based protocol that enables connectivity of nearly every kind. You can connect to networks, devices, and phones; you name it, and Bluetooth can connect to it. It couldn't be easier. Almost every Bluetooth-enabled device, from PDAs to notebooks and PCs, and now even smartphones, can auto-sense a Bluetooth device within its proximity and connect to it with just a click of a button.

There are literally thousands of Bluetooth-enabled devices available today, and more are on the way. Everything from simple input devices such as keyboards and mice to innovative and highly functional accessories are coming with Bluetooth. Cutting loose from the tangle of cords and wires is becoming easier and easier with the host of accessories appearing on the market. The following are some of our favorites in several categories.

PDAs

HP iPAQ h6300 Pocket PC

Take one look at the h6300 (visit www.hp.com and select Handheld Devices, Business iPAQ Pocket PCs, and HP iPAQ h6300 Pocket PC Series) and you know that it's definitely a PDA. Dig a little deeper, and you'll find out that it's also able to send and receive phone calls, send instant messages and SMS (Short Message Service, which enables you to send text via cell phone) messages, check your email, browse the Internet, connect to any Bluetooth device or network, play video and MP3s, and just about



anything else you can possibly imagine.

The built-in camera allows you to take pictures and share them instantly via email or MMS (Multimedia Message Service). The SD (Secure Digital) memory slot is expandable up to 4GB, allowing plenty of media, documents, or applications to reside on your PDA. The h6300 also features a removable, snap-on thumb keyboard that makes inputting contact information, composing emails, or jotting notes simple and efficient. It includes Outlook for productivity, Word for document creation and management, Excel for spreadsheet viewing, and Internet Explorer for anywhere, anytime Web access via the 11Mbps (megabits per second) wireless networking adapter or cellular access.

Integrated Bluetooth makes printing documents, file sharing, and connecting accessories simple. The h6300 supports LAN (local-area network)-via-Bluetooth (for network connectivity), Basic Printing Profile (to print documents on any Bluetooth-enabled printer without the need for printer drivers or cables), and hands-free operation via Bluetooth-enabled keyboards and headsets. The Service Discovery Profile automatically determines what Bluetooth devices are within range and initiates support authorization, making connectivity hassle-free. For a Windows-based PDA, you would be hard pressed to find anything better than the h6300. It's well worth the \$599 price tag and is sure to provide years of dependable, simplified functionality. This is the closest you can come to carrying a PC in your pocket.

palmOne Tungsten T5

The sleek Tungsten T5 handheld from palmOne (www.palmone.com/us/products/handhelds/tungsten-t5) has one feature that makes it invaluable to the mobile professional who relies on her PDA: 256MB of flash memory (215MB user available) that protects data even if the device



fully loses its charge. It can even double as a flash memory drive when connected to your notebook or PC, making document portability a snap. But that's not the only great thing about the Tungsten T5. A high-resolution 320 x 480 color screen, Bluetooth wireless technology, and an all-new slim design, the Tungsten T5 gives professionals the folders and files they need whenever and wherever they need them, along with productivity applications that are among the industry's best.

The Tungsten T5 with PalmOS supports Word- and Excel-compatible documents and allows you to view your PowerPoint files with Documents To Go software. You can even view PDFs with Adobe Reader, listen to MP3s, view photos and video clips, and even play a quick round of Mini-Putt between meetings.

With built-in Bluetooth, the Tungsten T5 becomes even more powerful. No cradle is needed for syncing with your Bluetooth-enabled PC or notebook computer. You can even connect to a Bluetooth-enabled phone as a modem to send and receive email, browse the Web, and send text messages. At \$399, the Tungsten T5 offers the mobile professional instant productivity with a host of applications and peace of mind with unsinkable data storage. For a Palm OS-minded professional, the Tungsten T5 is the clear choice.

Smartphones

palmOne Treo 650

If "Ultimate All-In-One Device" had an entry in the dictionary, it would include a picture of the Treo 650 (www.palmone.com/us/products/smartphones/treo650). It's a compact mobile phone, a PDA, an MP3 player, and a digital picture and video camera all in one. You can check your email, send instant messages to your associates, and



surf the Web, all while managing your contact information and scheduling events. There's also Bluetooth, of course. With expandable SD memory, you can fit up to 4GB of data in your pocket.

As far as connectivity goes, you're covered no matter the environment. The Treo 650 features a four-band GSM (Global System for Mobile Communications)/GPRS (General Packet Radio Service) wireless radio, making it a truly global mobile phone with Internet and cellular connectivity wherever you may roam. With Bluetooth, you can sync with your PC/notebook and connect to a Bluetooth-enabled LAN. Barring that, it also connects via USB for syncing via Microsoft ActiveSync (making it compatible with Outlook and other Microsoft Office products).

Because it runs the PalmOS, applications such as Documents To Go, Adobe Acrobat Reader, and other Palm-compatible software are available, turning what used to be a device for voice communication into an all-around productivity powerhouse. Provided you are looking for a PalmOS-based device, the Treo 650 is absolutely the top pick for your mobile connectivity and organization needs and is worth every single cent of the \$449 street price. Once you get your hands on one, you will wonder how you ever managed to get by without it.

Audiovox SMT5600

The SMT5600 (visit www.audiovox.com, type **smt5600** in the Search By Model # field, and click Go) is one of the most impressive phones we've ever seen. It's a tri-band GSM-based phone, which means it works overseas, as well as at home, and features a crystal clear 2.2-inch, 176 x 220 pixel LCD capable of up to 64,000 colors. With built-in Bluetooth, speakerphone, mini SD (Secure Digital) memory card slot (expandable to 4GB), Infrared IrDA SIR



(Infrared Data Association Serial Infrared) port, a VGA camera that shoots both photos and video, and a host of familiar software such as Outlook, this smartphone is definitely tops in the Windows-based category.

Add the inclusion of Windows Media Player 10 Mobile, and you have a truly portable multimedia device. Full MP3, WMA, and MPEG playback means that you have one of the most fully featured devices available. And it's a phone, too. The best part is that it's about the same size and weight (less than 3.6 ounces) as a deck of playing cards. If you are inclined toward a Windows-based PDA for your organizational needs, be sure to check out the Audiovox SMT5600, the leader among the new line of Windows Mobile smartphones. Click the Dealer Locator link on the product page for local availability and pricing.

Nokia 6680

The small yet powerful Nokia 6680's (www.nokia.com/nokia/0,,70452,00.html) main feature is that it boasts two separate cameras—a 1.3 megapixel digital still camera and a VGA camcorder—all in one small package. With the VGA camera, you can do face-to-face video calls with compatible devices. Thanks to Bluetooth, you can also use Nokia's Xpress-Print printing solution, which includes Pict-Bridge direct printing, to automatically print the digital snapshots you take. Email access, instant messaging, and mobile Web also feature here, along with stereo MP3 and video playback. A less expensive and smaller device, the Nokia 6680 is a sleek smartphone with unique and impressive features. Click the Store Locator link for pricing information.



Sony Ericsson P910a

Sleek and stylish: That's the Sony trademark. Sony's design conventions translate beautifully with the P910a (Visit www.sonyericsson.com, select your region, click Products, and click

P910a), perfectly blending form with functionality. The Sony Ericsson P910a's most compelling feature is the built-in, fully featured keyboard on the back of the flip, which eliminates the need for an external keyboard accessory. Suddenly, sending text messages and emails, surfing the Web, and even inputting contact information has become easier than ever. The P910a also features a fully functional PDA, built-in Bluetooth, digital camera with video, MP3 playback, and every other feature you'd expect out of an industry-leading smartphone. However, unlike most other smartphones, it's small and actually looks like a cell phone, eliminating the social stigmas of lugging around a gigantic PDA-sized brick. If a strong sense of style plays into your mobile connectivity needs and you don't mind the \$649 price tag, the Sony Ericsson P910a is definitely the choice for you.



Accessories

3Com Wireless Bluetooth USB Adapter

In order to use any of the hundreds of Bluetooth accessories available on the market, your PC or notebook computer will have to be Bluetooth-enabled. If it doesn't come with Bluetooth built in, the 3Com Bluetooth USB Adapter (visit www.3com.com, mouse over Products & Services and Wireless, click Bluetooth Products, and select the product link) is a perfect choice. It's compact and stays out of the way while offering up to 10m of range for device access. You can use the adapter to share files, connect to a network, or enable devices such as wireless keyboards, mice, and headphones.



3Com's Bluetooth Connection Manager provides auto-discovery and makes management of devices and resources point-and-click simple. Sure, there are other, less expensive Bluetooth adapters on the market, but 3Com is by far the

most reliable and effective of them all. Street prices vary, but you should be able to buy the device online for less than \$60.

ThinkOutside Stowaway Universal Bluetooth Keyboard

The Stowaway Bluetooth Keyboard (www.thinkoutside.com/stowawaybt_product.html) makes interacting with your PDA, notebook/PC, or smartphone easy. It's a full-size keyboard that folds into a compact form about the size of a standard PDA, allowing it to easily fit into a pocket or purse. No longer will you need to use strange character symbols or an on-screen keyboard to input all of your contact data, compose emails, or surf the Web. The \$149.99 price tag is a bit steep, to be sure, but when you consider the convenience and simplicity of this keyboard, you will find the cost justified.



IOGear Bluetooth Optical Mini Mouse

IOGear's Bluetooth Optical Mini Mouse (www.iogear.com/main.php?loc=product&Item=GME225B) is absolutely ideal for mobile computing. It's ultra-small yet functional and comfortable in the hand. It's also lightweight, making it ideal for the traveling professional whose laptop case hardly needs extra weight. The \$69.95 price tag places it on-par with other wireless mobile mice on the market. What really sets this mouse apart from other compact mice on the market is the super-high 800dpi resolution, making it among the first minimice geared toward the graphic design professional or the precision professional. ■



by Joe Peacock

USE YOUR BRAIN

left side

right side

Portable Audio for iPods
AC & Battery Powered
XdB™ - enhanced Subwoofer
High Efficiency Digital Amplification
Wireless Remote
Built-in iPod® Cradle
Neodymium Drivers
Onboard Digital Signal Processor
S-Video Output
Universal Power Adapter
Auxiliary Input Jack

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The Q&A Board is incredibly easy to use. It features a user-to-user design that helps users of all skill levels find quick answers to computing questions. It's also an excellent forum for exchanging useful information and helpful tips. So

whether you're a new computer user looking for straightforward answers or a tech guru wanting to help others, check out the Q&A Board.

To access the Q&A Board, just go to www.pctoday.com and click Q&A Board in the blue menu on the left. Don't wait—start posting today!

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Wish you had one customized location where you could store solutions to all your computing questions, problems, and/or interests? Look no further! We have created My Personal Library—a subscriber-only feature for all Sandhills Publishing computer publication sites (*PC Today*, *Smart Computing*, *Computer Power User*, and more)—that you can access from any of our sites, at any time, just by logging in.

Getting Started

1. When reading full articles, daily tips, Q&A messages, tech support listings, and other items that you wish to save to your library, click the Add To My Personal Library link in the upper-right corner of the page.

2. Create a new folder for the item or add to an existing folder. You may also include a brief note about the item for future reference.
3. Click Save, and you'll see a screen confirming that the item has been added to your library. **It's that easy!**

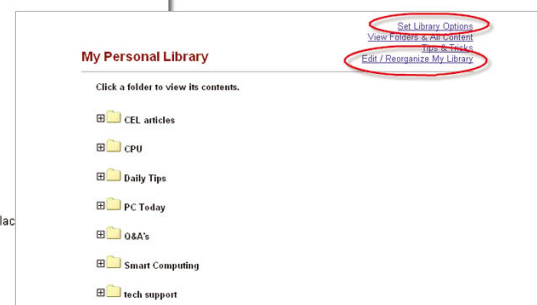
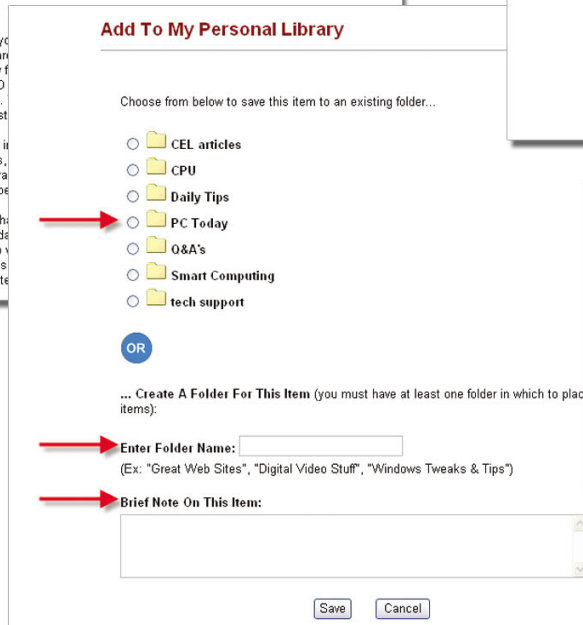
Check Out Your Collection

1. Click the View My Personal Library link from the upper right of any full article, daily tip, Q&A message, tech support listing, or within the My Special Features area (link located next to the Welcome message on the home page when logged in).
2. Permanently customize your Library display view by clicking the Set

Library Options in the upper right. Choose which setting you prefer to use and click the Change button. From that point on, your library display will always default to your customized option.

3. Click the Edit/Reorganize My Personal Library link to edit, move, or delete any items you have stored within your library.

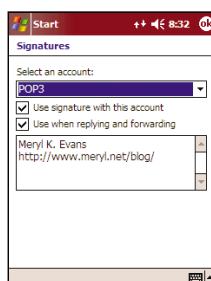
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Windows Mobile Tips

Add A Signature To Your Email

You can save time by automatically adding signatures to emails sent from your Windows Mobile device. Furthermore, this gives you an opportunity to advertise your business or Web site. Tap Start and Messaging option to open Inbox. Look at the bottom of the screen and select Tools and tap Options.... On the Options screen, select the Accounts tab and then tap the Signature button.



Add a signature to emails sent from your Windows mobile device.

From the Signatures screen, select the email account to which you want to add a signature from the drop-down list. Check the box next to Use Signature With This Account. Check the box next to Use When Replying And Forwarding if you want the signature to appear in your replies and forwarded emails. Enter your signature into the text box and then tap OK to finish the process. Next time you send an email from this account, the signature will appear.

Track Money

If you use Microsoft Money to manage your finances, you can download Microsoft Money for Windows Mobile devices at no cost from www.microsoft.com/windowsmobile/organized.msp. When you travel or run errands during your lunch break, you can enter your expenses into Money and sync it with your desktop computer when you return. The application allows you to view balances on the Today screen.

Manage Passwords

SecureWord.mobile from Cezeo Software (www.cezeo.com) comes with a password generator so you don't have to keep thinking of a new password. It manages passwords on your Pocket PC using Advanced Encryption Standard (AES) adopted by the U.S. Government in 2002. For added security, the program clears the clipboard when you minimize it or quit the application.

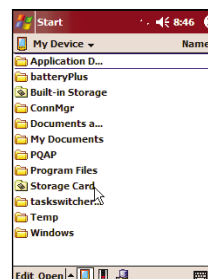
Options For Data Storage

One song can take up a lot of your device's storage space, so it's wise to get a storage card. These cards resemble floppy disks, except they're smaller than a matchbox. Check your device's specs to find out which one you need and how to insert it. These cards typically slide in easily and click when in place. If you're jamming or pressing it hard, it may be in the wrong way. Also, some devices come with a plastic blank card as a placeholder, so check for it before inserting the card.

Available storage cards include the SD (Secure Digital) card, miniSD card, CF (Compact Flash) card, and MMC (MultiMedia Card). These differ in size and transfer rates. To move data to a storage card, you can use ActiveSync on your Desktop or carry out the following steps on your device:

- Tap Start and File Explorer.
- Tap and hold on the item you want to put on the card.
- Tap Cut.
- Select My Device and select the card's folder.
- Tap and hold on the new folder.
- Tap Paste.

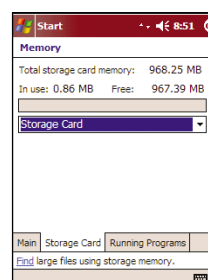
Once you start using the storage card, you can keep track of the amount of free space on the card at any time. To do this, tap Start and choose Settings, select the



The storage card has its own folder for moving files onto the card.

System tab, and tap Memory. Tap the Storage Card tab and select the Storage Card option from the drop-down box, if not already selected. The amount of space available appears on the top of the screen along with the amount of free and used space.

You can install applications on the storage card instead of the default location, which is the main memory. However, be aware that some applications are required to be installed on the main memory in order to function properly.



You can keep track of how much memory is available on the storage card.

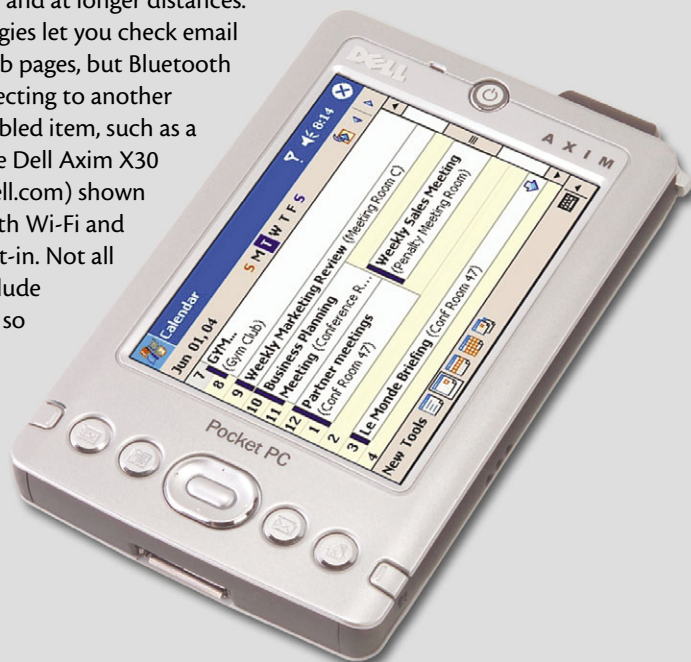
When installing a new application onto the Windows mobile device through the PC, the Application Manager window asks Install [application name] Using The Default Application Install Directory? On this screen, select No, and another window appears with a drop-down box that says Select Destination Media. Select Storage Card, and the application will install at that location.

Mobile Internet Resources

Technically, wireless devices can load any Web page, but not without drawbacks such as slower page loading

Pocket PC Buying Tip

With falling prices and the proliferation of hotspots, connecting to wireless networks becomes more feasible. Many PDAs come with either Wi-Fi, Bluetooth, or both built-in. Wi-Fi differs from Bluetooth in that it can transmit faster and at longer distances. Both technologies let you check email and access Web pages, but Bluetooth relies on connecting to another Bluetooth-enabled item, such as a cell phone. The Dell Axim X30 (\$199; www.dell.com) shown here comes with Wi-Fi and Bluetooth built-in. Not all Axim X30s include these features, so check before you buy. ■



speeds, a smaller screen for viewing the page, and difficulties in navigating Web sites. New mobile-specific Web sites regularly appear and provide easier mobile Web surfing. Get answers on many topics with Answers.com's mobile edition. Head to mobile.answers.com and enter keywords for an explanation or definition on the topic of interest to you. Enter "August," for example, and it responds with a definition, "The eighth month of the year in the Gregorian calendar."

AOL's mymobile.aol.com includes AOL Mail, two MapQuest features, and an extension of AIM (AOL Instant Messenger) Instant Pictures. MapQuest comes with Find Me, which works with GPS (Global Positioning System) technology to find a user's location, maps, driving directions, and nearby places. Traffic, another MapQuest feature, allows users to receive real-time traffic information for about 100 metropolitan areas in the U.S. Users can send pictures

from their PCs to mobile AIM users, as well as mobile users who don't have AIM. AOL's available mobile services depend on the device's mobile carrier.

At Microsoft's mobile.msn.com, you can chat, send emails, browse MSN Web sites, and get real-time alerts on weather, traffic, news, stocks, and sports.

Tap Shortcuts

CTRL-click lets you quickly and subsequently choose multiple items or files. The Windows mobile device has a similar feature. Instead of using CTRL-click, do a tap and drag. Tap the first item and hold down the stylus while selecting the following items. For example, if you're moving five files to another folder, tap the first file and drag the stylus down to select the following four files and (while still holding the stylus on the screen) drag it to the desired folder.

Another useful, tap-related shortcut works like the right mouse button. In

some cases, you can tap an item and hold the stylus on it for a few seconds. Shortly, a menu appears that offers Copy, Paste, Cut, Back, Forward, or other options, depending on the window you have open.

Windows Explorer Folder Trees

Do you prefer the folder layout in Windows Explorer? If you want the same layout on the Windows mobile device, download GSFinder+ (www.geocities.jp/todamitsu2004/GSFinderE.htm) or Total Commander for Pocket PCs (www.ghisler.com). Both programs are freeware, and GSFinder+ comes with drag and drop, file search, context menu, and extension viewing capabilities.

Total Commander includes zip/unzip capabilities, a built-in text editor, properties dialog, and the ability to select or deselect multiple files. To install either program, copy the CAB (cabinet) file to the mobile device. Find the file on the mobile device and double-click it to load the application.

Manage File Extensions

Using File Types from Folder Options in Windows Explorer helps you manage your file extensions and associate them with programs. For instance, DOC files are assigned to Microsoft Word, so whenever you click a file with the .DOC extension, it opens in Word. Clicking a PPT file opens the file in PowerPoint. BadSchwii's myExtensions (www.badschwii.com) does the same thing for mobile devices.

The look-and-feel of myExtensions closely matches that of Windows Explorer. The application can help you add new file extensions, associate an extension with a different program, delete extensions that aren't in use, and change icons of extension type. A few programs have the capability to display a JPEG file. If your mobile device opens such files in Internet Explorer, you can use myExtensions to assign the extension to another program that can view JPEG files. ■

by Meryl K. Evans

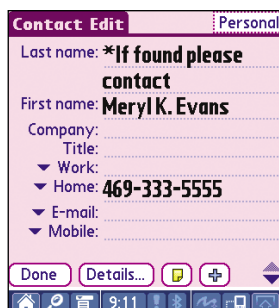
Palm OS Tips

Make Your PDA Easier To Identify

The thought of losing the handheld device is frightening, especially because most people use them to store personal information. If you've misplaced your PDA, you may have a chance of getting it back if a kind stranger picks it up and attempts to find its owner.

Pets don't like wearing collars, but they're important due to the information they contain: the owner's phone number and address. You can apply a similar concept to increase your chances of getting back your lost PDA. Some suitcases, wallets, and purses come with a preprinted card for you to enter your name and contact information. In the event the item gets lost or misplaced, the person who finds it knows who to contact. Similarly, you can put a business or personal card in the device's carrying case.

Create a label with your contact information to put on the back (avoid covering the serial number) of the PDA or etch your information onto it. Another thing you can do is ensure that your information appears first in the Address Book. Create a new address book entry and in the Last Name, enter ***If found, please contact**.



In case you lose your PDA, create an address book entry that stays at the top of the list to make it easier to find the owner.

Including the asterisk puts the entry first in the Address Book. Add all of your contact information. Alternatively, you could do these steps in Memo. Nothing can ease the aggravation of losing a PDA, but at least you can make it easier for someone to figure out how to reach the owner.

The palmOne device doesn't have an owner's screen that appears when activated. Work around this limitation by creating an Event that repeats and includes your name and contact information. You can make it repeat daily, several times a week, once a week, or whenever you prefer.

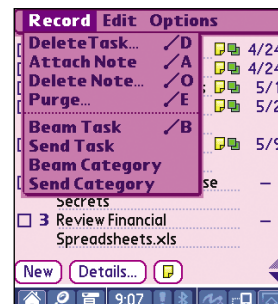
Screen Cleaning

Frequent tapping and finger poking leaves scratches and marks on the handheld's screen and Graffiti area. You can take steps to protect it, keep it clean, and make it more responsive to data entry.

Take care of the Graffiti area by covering it with Scotch Tape, which does not leave glue residue after you remove it. A bonus is that it may improve Graffiti recognition because it adds friction to the surface, making it easier to recognize Graffiti.

To give the screen a good cleaning, use furniture polish or a commercial stove cleaner that contains silica in its ingredients list. Put a drop of cleaner onto a clean cloth, and then lightly buff the screen. Alternatively, you could use a soft, damp cloth with diluted window-cleaning solution.

Screen protectors work well. However, some screen protectors lower the responsiveness of the touchscreen and the screen's visibility. An alternative is to use overhead transparencies or a clear transparency sheet. Unlike lamination paper, however, these don't stick permanently, and they can slip off.

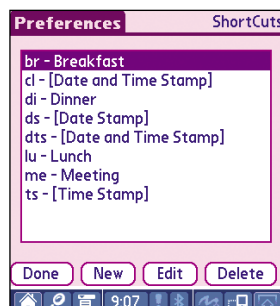


Clean up the database by purging old records and saving them to the PC or simply clearing them out. Also note that this menu has five shortcuts.

Purge Deleted Data

From time to time, it's beneficial to purge your deleted data from the native applications so that HotSyncing won't slow down. Start by navigating to Date Book and To Do applications to review and delete old items. Delete an item from the Date Book by selecting the event and then tapping Menu and Delete Event. For To Do, select the task, and then tap Menu and Delete Task.

After you've determined you've done enough pruning, it's time to Purge. In Date Book, tap Menu and Purge... In the Purge window, select



Create, edit, and delete custom shortcuts via the Preferences window.

palmOne Buying Tip

Next time you shop for a palmOne (www.palmone.com) device, consider whether or not you want a camera. Newer devices hitting the market frequently come with a built-in camera. Though most palmOne devices include a built-in photo album, only a few contain a built-in camera. However, the palmOne Zire 72 comes with a built-in camera that can take a 20-minute video on its screen with a resolution of 320 x 240. The palmOne Zire 72 shown here comes with a built-in camera and a suggested retail price of \$299. ■



the timeframe for deleting events (1 Week, 2 Weeks, 3 Weeks, or 1 Month) for the Delete Events Older Than field. If you wish to save an archive copy on the PC, check the appropriate checkbox; otherwise, leave it blank. Tap OK. Repeat the steps in To Do. Your database will now be cleaner and should maximize HotSync operations.

Switch Between Applications

The more applications you add to the Palm, the longer your Applications Screen gets. That means more scrolling. In the Graffiti area, write the first letter of the program you want to load, and the screen will take you closer to that application.

You can also look up applications by category. To switch between categories while in the Applications Screen, press the Applications screen button repeatedly until you navigate to your desired category or select it from the drop-down menu by tapping the down arrow in the top right-hand corner of the screen.

The same concept applies for all the buttons. Press the Address Book button repeatedly to change categories. The same occurs for To Do and Memo Pad. Pressing the Calendar button will give you different calendar views. You may also want to consider third-party software that makes it easier to switch between applications, much like the ALT-TAB feature on PCs.

Write Faster With Shortcuts

Whenever you tap the MENU screen button, you get the menu with a list. Next to each item in the list with an available shortcut is a backslash and a

letter. Instead of using CTRL or ALT to do shortcuts, similar to your keyboard, tap and draw a slant like a backslash.

Copy and Paste are frequently used shortcuts. To Copy:

1. Highlight the text.
2. Make the backslash stroke.
3. Write a "C."

To Paste, repeat steps 1 and 2, and write a "P" instead of a "C."

Just knowing Steps 1 and 2 will open the doors to many more shortcuts. All you need to do is learn the letters that correspond to them.

You can also do shortcuts for frequently used phrases or time and date stamps. Instead of the backslash, it uses cursive lowercase "L" movement. To see the shortcuts for phrases, tap Applications and Prefs and then choose Shortcuts from the Personal menu at the bottom of the screen. One of the shortcuts is "breakfast," which uses "br." When you want to write "breakfast," draw the cursive lowercase "L" followed by "b" and "r," then the word appears.

Feel free to add your own personalized phrases. When you create a phrase such as "Lunch," add a space at the end of the word as in "Lunch " so that when you use the shortcut, it adds the space for you and you can fill in the rest. Track your phone calls by creating a shortcut such as "@DTS - called." DTS posts the date and time stamp. To use the date and time stamp, the code must come first in the shortcut.

Virtual Business Card Feature

Save a person's time by distributing your virtual business card via beaming

instead of handing out a paper-based card. First, create an entry in the Address Book listing the information you'd want to share with others. Next, select the entry, tap Menu, select Business Card, and tap Yes. This sets your Address Book entry as the Business Card.

When you meet someone with a Palm OS device who wants your business card, open Address Book, tap Menu, and select Beam Business Card. Verify that the two PDAs are pointing at each other within a short distance. You can send another address by selecting the entry, tapping Menu, and then Beam Contact.

You can also beam addresses from a specific category. For example, create a new category for a team working on a project together, such as Project. While entering each member into Address Book, select Project for the category. When a new team member joins the team, you can beam all the addresses from the Project category instead of having to select the entry for each individual team member and beaming it separately. To beam all of the entries from a category, tap Address Book, select Project from the category drop-down list, and tap Menu and then Beam Category. ■

by Meryl K. Evans

Handheld Tips

Change Signal Bars To A Numerical Value (BlackBerry)

If you'd rather read an actual signal meter value rather than the number of "bars" you have in a particular area, you can change the readout to display the actual number. While at the home screen, hold down the ALT key (the half-moon button on the left) while you type **NMLL**. The bars will disappear and be replaced with a numerical value. This new meter is very helpful when troubleshooting greater-than-average battery consumption in particular areas. Anything at -90 to -50 is fairly efficient signal strength and will use a normal amount of your battery. If you are in the range of -100dBm (decibels referenced to one milliwatt), however, you will be transmitting at maximum power. Because coverage is very spotty at this weak a signal, you may end up transmitting several times before the packets make it through. This might help explain any poorer-than-normal battery life. To get the bars back, go to the home screen and hold down the ALT key while you type **NMLL** again. The numerical reading will disappear and be replaced with the familiar bars.

Prolong Your Battery's Life (BlackBerry)

Use the holster when not actively using or viewing your BlackBerry. It turns the screen off, which goes a long way toward preserving battery life. Also, turn off your BlackBerry's radio when in areas that offer poor service or no service at all. The BlackBerry will attempt to transmit at full power while in these areas to establish a connection, which will devastate your battery's remaining power. If you'd rather not worry about manually managing your radio's activity, go to Options and set Auto On/Off to help conserve your battery's life.

BlackBerry Troubleshooting Tips

It's rare, but it happens: If your BlackBerry device freezes and the RESET message appears on your screen, you don't have to throw your hands up in frustration. You can type **INFO** to obtain more information about what caused the freeze. This will help if you need to call your provider's technical support team.

If the need arises to reboot the device, don't just pull the battery out and stick it back in, as this can cause data loss. Instead, press and hold ALT-(half-moon key) CAP-BACKSPACE simultaneously for two seconds. This will cause a "soft reboot," which will reset your device without the risk of losing precious data.

BlackBerry Message Navigation Shortcuts

Here are some helpful shortcuts to make reading and filing messages easier.

(ALT key = half-moon key [or orange key] on the left side of keyboard below the A; CAP key = bottom-right key [AKA SHIFT key])

N: jump to next message

P: jump to previous message

U: jump to closest unread message

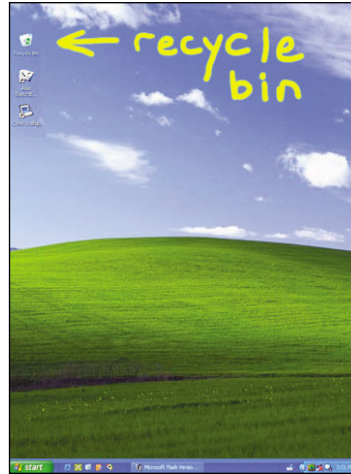
ENTER or SPACE BAR: scroll down a page/screen at a time

ALT-ENTER or ALT-SPACE BAR: scroll back a page/screen at a time

B: scroll to end of page

T: scroll to top of page

BACKSPACE: close message and return to message listing



Tablet PC brushes can be configured for size, shape, and color. Use brighter colors for greater impact on dark backgrounds.

R: reply to or answer current message

F: forward current message

Select Text (BlackBerry)

Press the CAP key and then scroll the thumb-wheel to select individual characters. To select entire lines at once, release the CAP key and scroll the thumb-wheel. Press the CAP key again at any time to return to the single-character selection setting.

Alternatively, you can hold the ALT key, click the thumb-wheel (don't hold it down), and then release the thumb-wheel and scroll with it to select entire lines. You can press and hold the ALT key at anytime to

start selecting by character again.

After making your selection, click the thumb-wheel and select Copy Selection to copy your selected text to the clipboard, or select Cut Selection to remove the text to the clipboard. To paste your copied text, navigate to the area you wish to paste to, click the thumb-wheel, and then select Paste Selection.



If you have a large amount of text to input, use the Write Anywhere feature to work on a much larger surface. The ink will automatically be converted to text when you are done.

Get Better With Your Pen (Tablet PC)

One of the best ways to become more familiar with the pen stylus on your Tablet PC is to play Microsoft InkBall, a game included with the Tablet PC operating system. In InkBall, you use your pen to guide colored balls into matching colored holes, gaining in score as you

succeed. The techniques used to guide the balls to their destination closely mimic those used in making ink strokes in other applications, thus providing a fun yet effective tool for getting better with the pen.

Manipulate Ink Selections (Tablet PC)

You can cut, copy, paste, move, and delete ink segments in about the same way you'd carry out similar actions with text. Simply use the Selection tool and highlight the portion of the ink segments you want to change, copy, or delete. To insert a word or shape into a segment of ink (such as a line of handwritten notes), highlight part of the segment, move it to the side, and insert your selection.

To change the properties of ink strokes already written in your document (such as boldness, italics, color, and weight), select the segment of ink you need to change and right-click (or hold down the pen on) the selected area. This will bring up the Format Ink menu, allowing you to make whatever changes you feel are necessary.

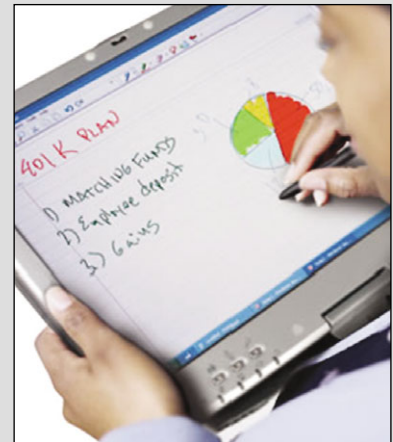
When you have a lot to write, consider using the Write Anywhere feature as an alternative to the input area of your Tablet PC. Tap your pen in the title bar of the TIP (Tablet PC Input Panel) to enable Write Anywhere. You will be able to, as the feature's name describes, write anywhere on the screen. Your ink strokes will automatically be converted to text as you write.



Converting from a "bars" display to a numeric display gives you an exact measure of your broadcasting power. This helps greatly for troubleshooting battery-drain issues.

Did You Know?

You can make annotations directly on your documents and presentations with your Tablet PC, making note-taking and meeting minutes a snap. Simply make your ink notes over the opened document or presentation and Tablet PC will save them into the document. Should you need to provide attendees with copies of your updated presentation later, you can use the TIP (Tablet PC Input Panel) to convert your ink notes to text. ■



Sometimes, you need to make notes directly over the top of existing documents and presentations. With Tablet PC, this is not only easy, but encouraged.

If you need to format your ink output, use the select tip described above or, from the menu bar, click Tablet Input, Tools, and Options and then select the Write Anywhere tab.

Convert Shapes (Tablet PC)

You don't need to worry about drawing a perfect circle (or a perfect square, triangle, line or any other shape) with Tablet PC. When you draw your shape, highlight it with the Selection tool, open the Actions menu, and highlight Change Shape To to make your shape perfect.

Group Pen Strokes Together (Tablet PC)

Sometimes, the text conversion utility will fail to recognize groups of ink strokes as a single word. To fix this, Tablet PC has an option called Group As One Word. Select the target ink strokes and then open to the Actions menu and select Group As One Word.

The Group command isn't limited to just words, however. You can use it to make practically any batch of ink strokes a single unit so that you can move them around as a group, instead of moving your writing, shapes, and callout flags separately.

Not Just For Writing (Tablet PC)

Most Tablet PC's come equipped with a built-in microphone that allows voice dictation into applications such as Windows Journal, Word, and Excel. After training the software to recognize your voice, simply speak your mind and your words will be recorded for later editing.

Additionally, you can program the Tablet PC to accept voice commands for verbally controlling your applications. Click Speech Tools and What Can I Say to see a menu of available commands. When you want to use voice commands, tap the Command icon on the left side of the Speech panel in the TIP. You should hear a beep and see an icon with the word "Listening" in the speech status bar.

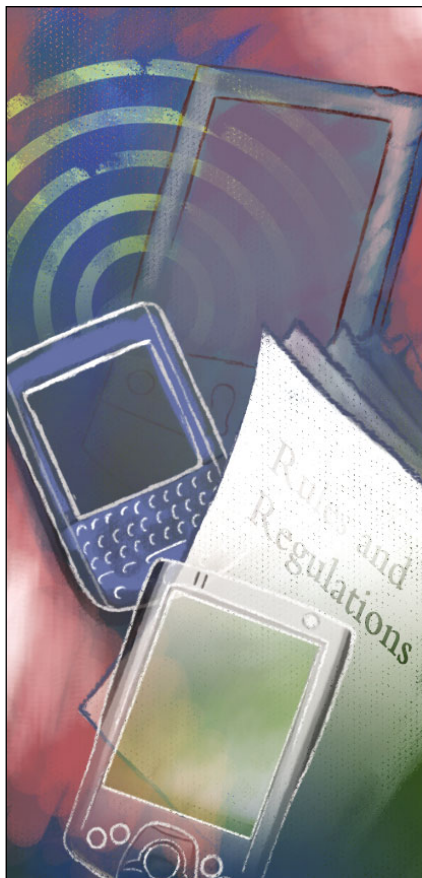
Right Is Not Always Right (Tablet PC)

Are you left-handed and tired of having drop-down menus pop up beneath your hand as you navigate your Tablet PC? Go to the Control Panel and select Tablet And Pen Settings to bring up the associated dialog box. Choose the Settings tab and then set your Tablet PC to work with you, the left-handed user. ■

by Joe Peacock

PDA's & Company Policy

Guidelines For Using Your Handheld At The Office



For anyone thinking about purchasing a shiny new Palm or Pocket PC handheld, a word of caution: Know the rules. In corporate America, protecting the network, ensuring stability for all users, and approving access are all paramount concerns. In fact, in many large corporations, you may find that your IT department will only let you use certain brands and even certain models, such as the Dell Axim X50 or the Palm Tungsten T5. Your company is protecting their investment in computer gear and maintenance, even if the policies seem heavy-handed.

Of course, large companies, such as General Mills, develop handheld policies as a way to help all employees access the network smoothly and securely, not

to create more bureaucracy. While violating some company policies may not get you fired, a network administrator (the person in charge of establishing handheld policies) may decide to block your network access or even report the unauthorized use to your superior.

In this overview of handheld policies, we'll explain why corporations institute these policies, the types of policies you may encounter, and how to make sure that your new handheld meets the increasingly stringent corporate guidelines.

Policies Explained

Handheld policies exist as a way to prevent network security threats. For example, in recent years, more and more large companies have offered wireless (usually Wi-Fi) networks, which use radio waves to make Internet and network servers available throughout your corporate campus. With wireless capabilities you can, for example, use a PDA to access the network without a cable, either from your own office or cubicle, down in the corporate cafeteria, or even from the parking garage. Unfortunately, hackers have used wireless networks to spread viruses, access financial data, or just to prove that a network is not secure. This has made network admins concerned about allowing anyone to connect with any device.

"To minimize security risks, a PDA policy will address a set of security practices that complement each other," says Roberta Cozza, a Gartner Group research analyst. "In general, these practices need to be reasonable and consistent—that is, implemented in all situations—and prioritize data exposure issues with strict guidelines on the amount of data and type of info that can be stored, accessed, and moved through handheld devices."

Cozza outlined the typical scenario in a large company, such as IBM or Novell. The information technology department will first establish policies that are fair and consistent and then communicate them clearly to all employees. In most cases, you can check for handheld policies at a company intranet site. Or you can just call your company tech support line and ask about which devices they have approved and how you can use the device on the network. You may also need to install a program on a handheld that lets you create a secure, password-protected connection.

Different Policies For Different Devices

Cozza noted that there may be several levels of handheld access policies, starting with limited access for a set number of handhelds or full access for a specific model, such as those made

Cell Phone Policies

Companies are less worried about cell phone use at a corporate campus, mostly because even the most powerful cell phones (such as a Motorola A630 flip-open phone) can't access a company server. Instead, cell phones connect to GPS (global positioning system) or GPRS (General Packet Radio Service) networks and can't be used to transmit company data from a server to the phone. Of course, if you use a Pocket PC or palmOne smartphone, such as the HP 6315 or Handspring Treo 650, your company will require that you follow the same handheld policies as those who just use a PDA for contacts and scheduling. To a company, these devices are actually handhelds first, that just happen to work like a cell phone. ■

Cell phones, such as the Motorola A630, are not as much of an issue in terms of corporate policies because they can't access network servers.



by Toshiba (www.toshiba.com) and palmOne (www.palmone.com). Choosing one or two approved devices helps the network admin test the hardware under specific conditions, support those approved devices when employees call the help line, and monitor the usage of those approved devices.

"Lately, large enterprises have felt the effect of the consumer devices changing too rapidly in both hardware and software, as they suddenly encounter unplanned and unbudgeted costs to change their software applications and computer hardware," says Doug Lloyd, the director of product marketing at Symbol Technologies, a company that helps corporations set network policies. "When you consider that some companies have employees that use 1,000, 5,000, or even 10,000 handheld devices company-wide, all accessing network resources at the same time, the multiplying effect of change could be staggering."

It's important to note that the proliferation of handhelds is a recent development. A Gartner Group study released in early May 2005 showed that there has been a 25% increase in the number of handhelds purchased since 2004. A handheld such as the palmOne Tungsten E2, for example, costs only about \$250, so it's affordable for many corporate employees. Even decent budget laptops cost as little as \$700. Also, a handheld device does not provide the same robust "user authentication" as a

laptop, so there's not the same ability to create a secure and encrypted connection. "Handheld devices are often brought in by individuals that buy them with their own funds and then use them in an uncontrolled and unmanaged way," says Cozza.

In some cases, a company will establish policies about the software you can use on a handheld. In addition to the network use policies and approved devices list, software policies help companies control exactly what kind of



This unassuming device poses a potential security threat because handhelds are so prevalent, can be used anywhere, and do not provide the same security functions as a laptop.

information employees can use on their Palm or Pocket PC. In a worst case scenario, employees could copy Microsoft Excel files to a handheld that contains, for example, detailed accounting information. Some companies create stringent software policies so that only certain applications will run, the Internet is not available, and the employee can't check email or run instant messaging programs, such as AIM (AOL Instant Messenger) or MSN Messenger.

"By providing standardized devices that have been configured specifically for necessary business applications, companies can reduce the risk of users not following usage policies," says Guy Conces, chief technology officer at Homecare Homebase, a company that provides a Palm and Pocket PC health care utility. Conces noted that the utility requires a password before an employee can even access the health care data, and the program blocks data access from the Internet or from a company network server. To the employee, a handheld that restricts access to only one approved application becomes less useful (meaning you couldn't use it to play games or check your email), but your company doesn't have to institute as many policies.

Follow The Rules & No One Gets Hurt

For the most part, handheld policies help you use the device without causing problems on the network. As long as you follow the corporate guidelines, use an approved device, and follow the guidelines for creating a secure connection to the network (usually by typing in a password that you received from a network admin), then there's a lot you can do with a PDA. For example, in large companies, such as 3M or Microsoft, employees use handhelds to stay connected with co-workers, track their schedules, and even take notes at meetings. Learning about handheld policies will help you take advantage of that shiny new PDA and use it with corporate blessings. ■

by John Brandon

Portable Gear

Accessories That Go Anywhere

by *Carmen Carmack*

Are you searching for useful accessories to enhance your mobile device? If so, check out our featured gear for some great ideas.



palmOne Universal Wireless Keyboard

The palmOne Universal Wireless Keyboard (\$69.99; www.palmone.com) features a folded, portable design and a full QWERTY keyboard. Because it uses IR (infrared) technology to connect wirelessly to your PDA, the keyboard does not require cables. What's more, two AA batteries power the device, so there's no need for an AC outlet or adapter when you use the keyboard. The Universal Wireless Keyboard is compatible with most Palm OS devices such as Tungsten C/E/E2/T3/T5 PDAs, Zire 21/31/71/72 PDAs, and Treo 600/650 smartphones. It is also compatible with a number of Pocket PC models from Dell, HP, and Toshiba. The portable keyboard weighs 7.4 ounces and measures 0.63 x 5.38 x 3.88 inches (HxWxD) when folded. For convenience, the keyboard features application launch keys for Palm and Pocket PC devices. You can customize the keyboard by programming shortcuts. The device also includes a handy power-saving feature.



Logitech EasyFit Over-Ear Headset For Mobile Phones

Logitech's EasyFit Over-Ear Headset For Mobile Phones (\$14.99; www.logitech.com) is one of three different corded headsets in the company's EasyFit product line. Available in black, blue, and white, the over-ear style features a Call/Answer button, an omnidirectional microphone, and a soft gel surface. Logitech offers earbud and boom-style headsets for the same price. Logitech designed all of its EasyFit headsets for compatibility with most cell phone brands. When you purchase a headset, you will also need to purchase a separate corded connector (\$4.99) that goes with your phone's headset plug. The headset attaches to the connector, and the connector attaches to your phone. And if you buy a different brand of phone, you won't need to replace the headset; simply purchase a compatible connector.

Belkin OmniDock-L Device Holder

The OmniDock-L Device Holder (\$39.99; www.belkin.com) is a handy gadget you can use to mount almost any handheld device in your car. The gray holder is compatible with PDAs, smartphones, MP3 players, and other portable gadgets. To make mounting easy and the holder moveable, the OmniDock-L features a rubber base and an adapter that fits into your vehicle's cup holder. Belkin designed the cradle to protect your mobile device from scratches. The OmniDock-L features a ratcheting neck that lets you adjust the height of your handheld device when you are using the cradle. To accommodate different-sized cup holders, Belkin ships the OmniDock-L with a small base and a large base.

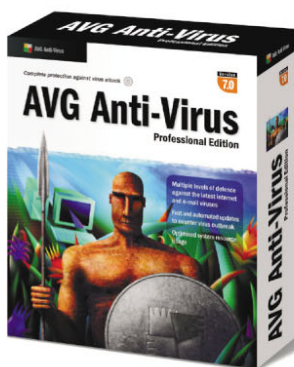


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**Tough on viruses,
easy on users.**

PhatWare PhatPad 2.1

Write On Your Pocket PC

Keeping in mind that “phat” is synonymous with “cool,” the software company PhatWare set out to design a note taking application that was as cool as it was accessible. PhatPad 2.1 (\$29.95; www.phatware.com) is a new and improved version with a host of new features. Although PhatPad 2.1 is a very slick application with an inviting interface, it’s possible that only Pocket PC users who are furious note-takers will truly appreciate this full-featured program.

PhatWare claims it has improved PhatPad’s digital ink algorithm, and we have to admit PhatPad is a little more responsive than the standard Notes application on our Dell Axim X30. PhatPad 2.1 also has an Animation Mode, which lets you animate your notes and drawings, and vertical and horizontal auto scrolling. Perfecting your stylus strokes to properly

trigger auto scrolling takes some practice, but with a few minutes of use, you’ll find that it’s a handy feature. As long as you’re not scrawling at 100mph, PhatPad 2.1’s auto scrolling should have no trouble keeping up with you.

As we continued to use PhatPad 2.1, a couple of features we initially thought were slightly extraneous became more useful. For example, PhatPad has an extensive color palette for taking multicolored notes; at first, we thought this was merely excess baggage used to justify the software’s price, but using different colors to separate multiple ideas on the same note pad turned out to be quite handy. If your notes become more complex, you’ll appreciate this feature.

If you add PhatWare’s Calligrapher software, PhatPad can recognize your notes and convert them to text. Once it



converts your notes to text, you can quickly search through your notes for specific text.

Despite PhatPad 2.1’s plethora of features, it remains little more than a souped-up version of the standard Notes application. Note-taking savants will love PhatPad 2.1, but anyone who is happy with Notes will probably want to pass. ■

by Vince Cogley

Agendus Professional Edition 9

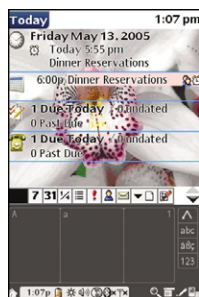
Put The “A” In PDA

Between surfing the Internet, posting to your blog, checking your email, and snapping a few pictures, you might have forgotten that your PDA can actually help keep you organized. The Palm OS includes several default applications that help you manage appointments, phone numbers, memos, and tasks. While these applications are serviceable, they’re nothing compared to the flexibility offered by iambic’s Agendus Professional Edition 9.0 (\$39.95; www.iambic.com).

Agendus integrates all your personal information into a single application and gives you the flexibility to manipulate that information as you see fit. The Today screen provides

an excellent overview of your day, but you can also view information in a multitude of other formats. Better yet, Agendus gives you the ability to quickly combine different types of information. For instance, you can quickly add a contact to a task or link a picture to an appointment.

Agendus Professional includes several wireless features that we weren’t able to test on our Tungsten E. If you can get online, however, Agendus Professional will let you check the weather, as well as send email and SMS (Short Message Service) text messages. Treo users will find they can change ring tones and dial contacts directly from their Agendus contacts list.



Agendus Professional, however, does include more than just added wireless features. The Free Time Finder lets you search for times you’re available and aids in scheduling new appointments, while the Power Search feature lets you search all your personal records for a specific search string. Both features are only available on the Professional version.

Agendus Professional Edition 9.0 requires Palm OS 3.1 or higher; Agendus Standard Edition requires Palm OS 3.0 or higher and sells for \$29.95. Some features may require a newer OS. For instance, picture support requires Palm OS 5 or higher. ■

by Chad Denton

Revving Up A REV

Up To 90GB Per Cartridge & Faster Than A Speeding DVD

Almost a year and a half after its introduction, Iomega's (www.iomega.com) REV drive still hasn't become a household name like the company's Zip drive did so long ago. It's actually a fine product: built for quality, innovative, compact, and reliable. We've used it as a business traveler would for a good while with no real complaints—in fact, even a little admiration.

In fact, if Iomega could cut the REV's retail price in half, it would really have something.

Our REV 35GB/90GB USB 2.0 External model was relatively slim, packing easily into our laptop case. Its weighty cartridges were smaller, but thicker, than Zip disks. Inside each cart is a hard disk and a motor, just as you would find inside a 2.5-inch notebook hard drive. Iomega tried once before to effect a cartridge/hard drive hybrid, but failed. A lesson learned from its Hapless, er, Peerless drive was to keep the read/write heads in the drive itself, not the cartridge, to lower costs. Air filtering, head cleaning, and other innovations address the dust contamination issue.

We found that our REV worked best as a travel-ready backup device, falling between a DVD burner and a full-fledged hard drive in speed. We could access any file in seconds, unlike with an affordable tape drive. In fact, we could run a PowerPoint presentation directly from the REV with little lag.

With the right software and BIOS support, the REV can be a bootable disaster recovery device. If you're faced with a format and rebuild in a hotel room scant hours before a major meeting, this could mean a great deal to you. Iomega bundles its Automatic Backup Pro software with the drive, but the app has its faults. Thankfully, our REV also came with a custom version of Symantec's Norton Ghost.

In drag-and-drop testing using a 500MB folder of mixed file types, our REV hit speeds of about 18.2MBps writing and 19.6MBps reading. A full backup of a 25.4GB heterogeneous partition using high compression took 3 hours and 11 minutes, with a 16.4GB result.

Hard competition. So why don't you know anyone who owns a REV drive?

REV carts are good for more rewrites than DVDs or tapes (theoretically up to one million), and they have a 30-year shelf life. They also won't scratch like a bare DVD. However, they're only as tough as the most resilient 3.5-inch hard drives (400G, 2ms shock tolerance). The drive itself is a lot more fragile (200G). Also, you may not want to lump REV cartridges in with your portable speakers, on the small chance that the magnets could cause some bits to backflip.

The REV's main vulnerability is more obvious: price. Optical discs are cheap to make; not so a cartridge with a hard disk and motor inside it. More to the point, lots of companies make CD/DVD drives and media. That's a big reason why optical formats' prices plunge over time. Iomega's prices generally don't. At this writing, our REV's retail price was the same as ever, at \$399.99 including one \$59.99 cart.

The fastest DVD drives can read at up to 16X (21.6MBps) near the end of a disc, and they're about to get more competitive on capacity. But until the 54GB double-layer Blu-Ray and 32GB double-layer HD-DVD rewritable formats hit the market—let alone mature enough to drop in price—the REV drive's only practical, removable rivals are DVD±R/RW (seven or eight 4.7GB discs) and double-layer DVD DL (four 8.5GB discs).

Ironically, the chief competition for this cartridge drive is the cheap, portable hard drive. These are based on tough notebook units, which now come in 5,400rpm and even 7,200rpm varieties, as compared to the REV's last-millennium 4,200rpm rotational speed. Tellingly, a Seagate portable 100GB drive costs just \$208 online compared to \$365 for the USB REV and two extra 35GB carts. Some REVolutions come and go. ■



by Marty Sems

The Hot Spot

Your Guide To Wi-Fi



Christian Perry is a long-time contributor to PC Today magazine and its sister publications, Smart Computing and the Smart Computing Reference Series. Please send your feedback to christian@pctoday.com.

On a crisp fall day in 1995, I sat at a gate in Pittsburgh International Airport, waiting to hop a ValueJet flight up to Providence. About 45 minutes before our scheduled takeoff, the gate attendant announced that ValueJet canceled the flight, and after much prodding by irritated travelers, the attendant finally supplied us with a reason for the cancellation: Apparently, someone repossessed our jet in another city.

When the cause for your flight's cancellation is repossession, you know you're truly stranded. Yet if Wi-Fi was around back then, the ensuing eight hours before my replacement flight would have been a breeze. Today, you can find wireless Internet connections at most major airports, which means that we can make the most of delays and cancellations by checking email and surfing the Web. Further, now that security procedures require us to arrive at airports earlier than ever, we can also make use of all that spare time waiting for flights.

You'll encounter a variety of wireless providers at airports around the country, including Boingo, T-Mobile, iPass, and others.

Nuts & Bolts

As you can see in the, "Hunting For Airport Hotspots" sidebar, major airports have multiple Wi-Fi locations

throughout their terminals, so you shouldn't need to venture very far to nab a connection. Of course, these are big airports, but it's interesting to note that even many small and mid-size airports have Wi-Fi, and they often boast more wireless coverage than their larger counterparts.

Officially, wireless access in most larger airports is often restricted to membership-only airline clubs and lounges. Unofficially, however, hotspots intended for these restricted areas almost always leak into public areas, which means that you can easily find a hotspot intended for a club even if you're standing or sitting near it. In fact, depending on your location, you might even find multiple hotspots, though they might vary wildly in strength and cost. Certain restaurants also offer Wi-Fi access, so keep that in mind if you're looking to satisfy both your hunger for food *and* on-line access.

If you're lucky, you'll find a strong, free connection. If you're not lucky, you'll pay for your Wi-Fi use, though the fees generally aren't ridiculous. Most providers offer a daily fee of about \$7 to \$10 that gives you unlimited usage, or an hourly fee for slightly less dough. If you use the same airport often, you can also consider paying a monthly fee of about \$30. Some services also offer prepaid connection cards that let

you pay, for example, \$25 for three connections that each last until midnight on each day you use it.

Keep It Safe

Using a credit card to activate your connection presents a perfect opportunity for a thief to peer over your shoulder and steal your card number. Don't be fooled into thinking that the people around you are necessarily trustworthy travelers. Keep your card hidden until you need it, and then reveal it only to your eyes.

Once connected to a hotspot, avoid making online purchases or using passwords to log into sites that contain sensitive information, such as banks. In an emerging scam known as Evil Twin, someone in an airport (or other location) can disguise a laptop or handheld device to appear as a legitimate hotspot. When you log in to the hotspot and access the Internet, the scammer can steal any usernames, passwords, credit card numbers, and other information that you enter into Web forms.

If you do make an online transaction, always verify that the transaction is encrypted by checking for the Secure Sockets Layer key at the bottom of the browser. If you don't see the key, don't perform the transaction. Also, remember to regularly update Windows, your

Boingo Airport Hotspots (by country)

85 United States
24 Brazil
14 Mexico
12 Philippines
5 Aruba
5 Canada
5 France
4 United Kingdom

SOURCE: BOINGO.COM

Hunting For Airport Hotspots

Finding hotspots in airports today is easier than ever, but you'll still need to do some hunting in most cases because most airports don't offer wireless access at all gates. If you don't see a particular terminal or gate in the following list detailing hotspots at major airports around the country, you still might find access at locations not explicitly listed if you're in range of the nearest hotspot.

software firewall, and other security software.

Tricks Of The Trade

Although finding an airport hotspot is easier than ever, it can still be a challenge in certain locales. If you don't see any hotspots at your gate, try moving a few gates down or even to the local food court because the presence of a wall or two could be all that's separating you from the range of the nearest hotspot. As I mentioned earlier, airline clubs and lounges often give free wireless access to their members, but even if you're not a member, you might be able to catch an overflowing signal outside of the club.

Available power outlets are hot commodities at airports, but as a wireless traveler, they're even more crucial for you. Wireless cards can sap power like crazy, especially in handheld devices, so if you find an area with a strong hotspot, look for an available power outlet to go with it.

Finally, as you travel to different airports, create a list of areas in those airports where you found free or particularly strong hotspots. Though you won't always be sitting at the same gate or eating at the same restaurant, at least you'll know where to walk if you need a connection. ■

by Christian Perry

Baltimore Washington International Airport

Providers: Airpath, Boingo, iPass, NetNearU, T-Mobile, and Wise Technologies

Locations:

- Piers B, C, D, and E
- United Airlines Red Carpet Club, Pier D
- USAirways Club, Pier D, adjacent to Gate D22

Logan International Airport (Boston)

Providers: Boingo, Independent provider, and T-Mobile

Locations:

- American Airlines Flagship Lounge, Terminal B, Upper Level, inside security checkpoint
- American Airlines Admirals Club, Terminal B, Upper Level, inside security checkpoint

Chicago O'Hare International

Providers: BT Openzone, iPass, Telia HomeRun, and T-Mobile

Locations:

- American Airlines Admirals Club in Flagship Lounge K, Terminal 3 near Gate H6, and Terminal 3, Concourse G
- British Airways FIRST Lounge, Terminal 5, Airside
- British Airways Terraces Lounge, Terminal 5, Airside
- Delta Air Lines Crown Room Club, Concourse L near Gate L2
- SAS (Scandinavian Airlines) Lounge, Terminal 5
- United Airlines First Class Lounge, Terminal 2, Concourse F
- United Airlines Red Carpet Clubs, Terminal 1, Concourses B (near Gates B7 and B18) and C (near Gate C16); and Terminal 2, Concourse F (near Gate F3)

Dallas Fort Worth International Airport

Providers: AT&T, Boingo, iPass, T-Mobile, and Wayport

Locations:

- American Airlines Admirals Clubs, Terminal A, Third Floor, across from Gate A24; Terminal B, First Floor, between Gates B5 and B6; and Terminal C, across from Gates C19 and C20
- Terminals A, B, C, E
- Car Rental Facility, near airport's south entrance
- Delta Crown Room Clubs, Terminal E near Gate E10 and near gate E34
- United Airlines Red Carpet Club, Terminal B near Gate B28

Denver International Airport

Providers: AT&T, iPass, and T-Mobile

Locations:

- Concourse B, Mezzanine Level
- American Airlines Admirals Club, Concourse C, Mezzanine Level, above Gate 39
- Delta Crown Room Club, Concourse C, Mezzanine Level, near Gate 40
- United Airlines Red Carpet Clubs, Concourse B, near Gates B32 and B44

Detroit Metro Airport, McNamara Terminal

Providers: Boingo, Concourse Communications, iPass, and MyConnect

Locations:

- Concourses A, B, C
- Domestic Baggage Claim, Terminal Level 2
- International Arrivals Waiting Area, Terminal Level 1
- Lufthansa Club Room
- Northwest Airlines WorldClubs Lounges, A Concourse at North Substation; A Concourse at South Substation; and B Concourse
- Ticketing, Terminal Level 3

Hartsfield-Jackson Atlanta International

Providers: Airpath, iPass, and T-Mobile

Locations:

- North Terminal
- American Airlines Admirals Club
- Delta BusinessElite Lounge, Concourse E across from Gate E14
- Delta Crown Room Clubs, Concourse A near Gate A17; Concourse B near Gates B10 and B25; Concourse E across from Gate E14; and Concourse T near Gate T6
- United Airlines Red Carpet Club, Concourse T near Gate T14

Los Angeles International

Providers: Airpath, Boingo, iPass, and T-Mobile

Locations:

- Alaska Boardroom
- American Airlines Admirals Club in Terminal 4, near Gate 43B
- Bradley Terminal
- Terminals 1, 2, 3, 4, 5, 6, and 7
- Tom Bradley International Terminal South Mezzanine
- Singapore Airlines Club

Newark Liberty International Airport (New Jersey)

Providers: Boingo, Concourse Communications, iPass, MyConnect, NetNearU, T-Mobile, and Wise Technologies

Locations:

- American Airlines Admirals Club, Terminal A

- British Airways Executive Club Lounge, Terminal B
- Concourses A1, A2, A3, B1, B2, B3, C1, C2
- Delta Crown Room Club, Terminal B
- SAS (Scandinavian Airlines) Lounge, Terminal B
- Terminals A, B, C
- Ticketing, Terminals A, B, and C
- United Airlines Red Carpet Club, Terminal A near entry to Concourse A1

John F. Kennedy International Airport (New York)

Providers: Airpath, Boingo, BT Openzone, Concourse Communications, iPass, Myconnect, and T-Mobile

Locations:

- American Airlines Admirals Club, Terminal 8, Concourse B
- American Airlines Admirals Club, Terminal 9, Mezzanine Level
- Bar Avion, Terminal 4
- British Airways Concorde Room, Terminal 7
- British Airways FIRST Lounge, Terminal 7
- British Airways Terraces Lounge, Terminal 7
- Brooklyn Brew Pub, Terminal 1
- Delancey's Bar, Terminal 4
- Delta Crown Room Club, Terminal 3, Gate 6
- Delta BusinessElite Lounge, Terminal 2, Upper Mezzanine, Gate 21
- Delta BusinessElite Lounges, Terminal 3, Gates 10 and 12
- Kosher Franks, Terminal 8
- Terminals 4, 8, and 9
- United Airlines First Class Lounge, Terminal 7
- United Airlines Red Carpet Club, Terminal 7

Minneapolis-Saint Paul International Airport, Lindbergh Terminal

Providers: Boingo, Concourse Communications, iPass, and MyConnect

Locations:

- Concourses C, D, E, F, and G
- Grieve Conference Center, Mezzanine Level
- Main Terminal Shopping Center
- Northwest Airlines World Clubs, C Concourse near Gate C12; and near beginning of F and G Concourses

Editor's Note: If you're looking for more, see Christian's listings for Philadelphia International, San Diego International, and Seattle-Tacoma International airports. at www.pctoday.com/pctjuly05/hotspot.

Stay Connected

Yahoo! Mobile



Do you Yahoo! on your mobile phone? You can send text messages and use such Yahoo! services as Mail, Calendar, Messenger, or Address Book with Yahoo! Mobile (mobile.yahoo.com), all for free—other than what you pay your mobile service provider. The features you get depend on your mobile phone's capabilities and the services included in your provider's plan. Mobile phones without Web capability have access to fewer Yahoo! Mobile features, but there's still a lot that most phones can do with text messaging. Let's take a closer look at the things you can do with Yahoo! Mobile and a Web-enabled mobile phone and walk through the signup process.

Yahoo! Mobile Text-Messaging Services

Most mobile phones and basic service plans include SMS (Short Message Service) text messaging, which lets you send and receive up to 160 characters at a time. Text messaging does not require a Web-enabled phone. However, your mobile service provider may need to activate text messaging under your service plan. The cost normally ranges from 2 cents to 10 cents per message, although some providers offer messaging plans at a flat rate. The Yahoo! Mobile services that use text messaging include Yahoo! Messenger, PC-based

text messaging, Yahoo! Alerts, and Yahoo! Local.

Text message with Yahoo! Messenger. Yahoo! Mobile offers a text version of the Yahoo! Messenger! IM (instant message) service. You can use your phone to sign in to Yahoo! Messenger, send and receive IMs, view a list of Yahoo! friends who are currently online, and add or remove friends from your friends list.

Text message from your PC. With Yahoo! Mobile you can send messages from your PC to a mobile phone. This is handy if you are at your computer when you want to send a text message; it's much easier to type with your computer's keyboard than with your phone's keypad. And when the recipient replies to your message, Yahoo! Mobile sends the message to your mobile phone.

Stay on top with Yahoo! Alerts. If you list your mobile phone as a Yahoo! Alerts device, you can regularly receive text alerts from Yahoo! Mobile. There are alerts for a variety of topics, including weather, sports, stocks, news, horoscopes, auctions, and even snowfall totals. What's more, if you use Yahoo! Mail, you can receive alerts that notify you of new emails. The alerts also include a portion of the message.

Look it up with Yahoo! Local. If you use Yahoo! Local on a PC to look up a business or organization, you can send the listing to your mobile phone as a text

message. The message includes the name of the business or organization, its address, and its telephone number. Some phones let you select and dial the phone number directly from the text message. If your phone is Web-enabled and your service provider supports it, you can view driving directions from a link included in the message.

Extras For Web-Enabled Phones

In addition to text-messaging features, you can use a Web-enabled phone and a data plan from your mobile service provider to access and use Yahoo! content and services. You can, for example, use the Yahoo! search engine, use a Web version of Yahoo! Messenger, and play Yahoo! Games. Visit mobile.yahoo.com/wap to find out more about the specific services available for your specific phone and service.

Get organized with Yahoo! Mobile Web. With your Web-enabled phone and a Yahoo! account, you can use services such as Yahoo! Mail, Calendar, and Address Book directly from your mobile phone. Your phone's mini-browser also lets you access the Yahoo! Mobile Web page to find driving directions, view maps, search for movie times and locations, and get sports scores. For a complete list of Yahoo! Mobile Web features and details about using them, see mobile.yahoo.com/resource_center/browseweb.

Exchange instant messages with Yahoo! Messenger. The Yahoo! Mobile Web version of Yahoo! Messenger offers a full-color, graphical interface. It also lets you log in and send messages directly to your friends. With the text-messaging version, you must log in and send messages to the Yahoo! Mobile number 92466.

Yahoo! your photos. You can use Yahoo! Photos to send and store camera

phone photos, create online photo albums and slideshows, and get mobile screen savers. If you are interested in this service, check mobile.yahoo.com/photos to see if it is available for your phone and mobile service provider.

Play with Yahoo! Games. Yahoo! offers numerous games for mobile phones that you can purchase online and then download. The cost is automatically charged to your provider's mobile service bill. To see the games available for your phone, go to mobile.yahoo.com/fungames/appdl.

Search and more. Numerous mobile providers support the Yahoo! Search feature, which lets you find information on the Web. For details, see mobile.yahoo.com/search. Yahoo! Mobile also provides a comprehensive directory of Web sites formatted to display on small screens, complete with a Yahoo! Bookmarking feature.

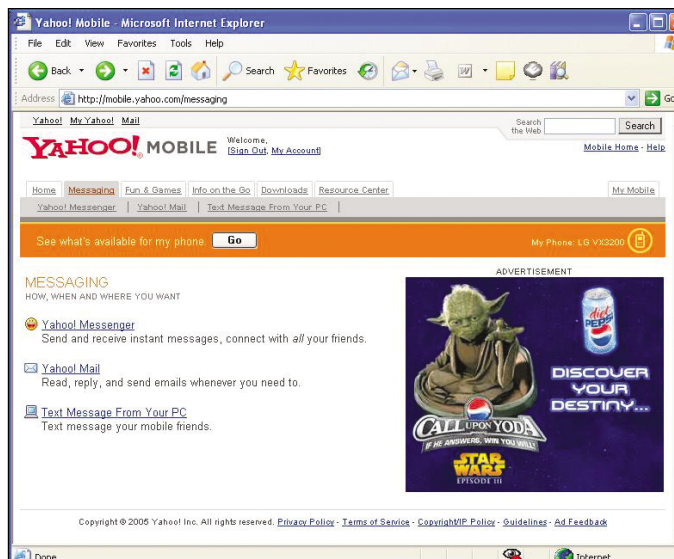
How To Sign Up

Now that you know what Yahoo! Mobile offers, you might be ready to give it a whirl. Here's what you need to do:

1. Activate mobile service for Yahoo!

Mobile features. Contact your mobile service provider to enable the features you need for Yahoo! Mobile, such as a data plan for Internet access (for Web-enabled phones) and text messaging. You can also confirm the costs associated with these services at this time.

2. Obtain a Yahoo! ID. If you don't have a Yahoo! ID, create one. The easiest way to do this is from a computer with Internet access. (You can use a Web-enabled phone to do this; however, the process is more involved and you may have to pay your mobile service provider for data access time. See



The Yahoo! Mobile Web site offers a tabbed interface that makes it easy to access all of its features.

mobile.yahoo.com/resource_center/tutorials/tutcontent?name=signin for details.) Assuming you're using a computer, open your Web browser and go to mobile.yahoo.com. Click the Sign Up link near the top of the page and complete the information on the registration page.

3. Register your phone with Yahoo! Mobile. Go to the Yahoo! Mobile home page and click the My Mobile tab. Click the Get Started Now button and sign on to Yahoo!. On the first screen, you need to enter the requested information about

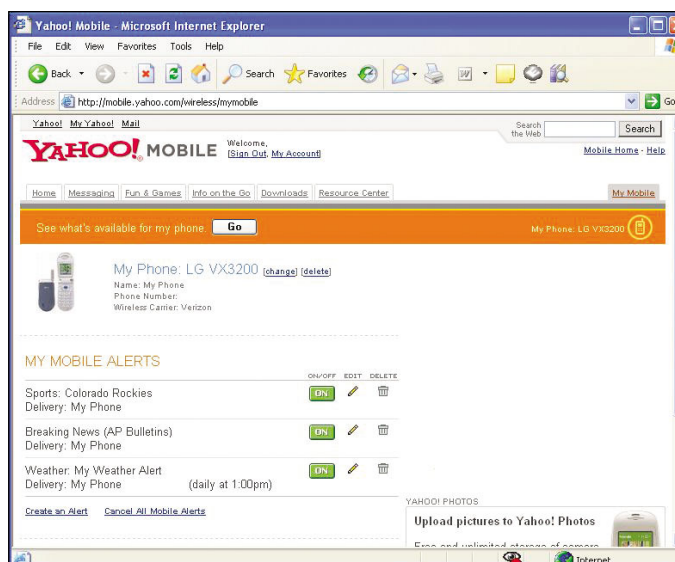
click the Go button next to See What's Available For My Phone. Based on your mobile service provider, phone manufacturer, and phone model, a list of compatible services displays.

5. Sign up for the services you want. Follow the on-screen instructions to sign up for Yahoo! Mobile services and learn how to use them.

Your Yahoo! Mobile

Considering the number of mobile phones and providers in today's market, Yahoo! has made its mobile service relatively easy to configure and use. The Yahoo! Mobile Web site customizes information based on your phone and provider. (Although we found that some of the information was not entirely accurate.) The My Mobile tab makes it easy to manage your mobile information in one location, and the features we tested worked well. If you are looking for more from your mobile phone, Yahoo! Mobile is worth a try. ■

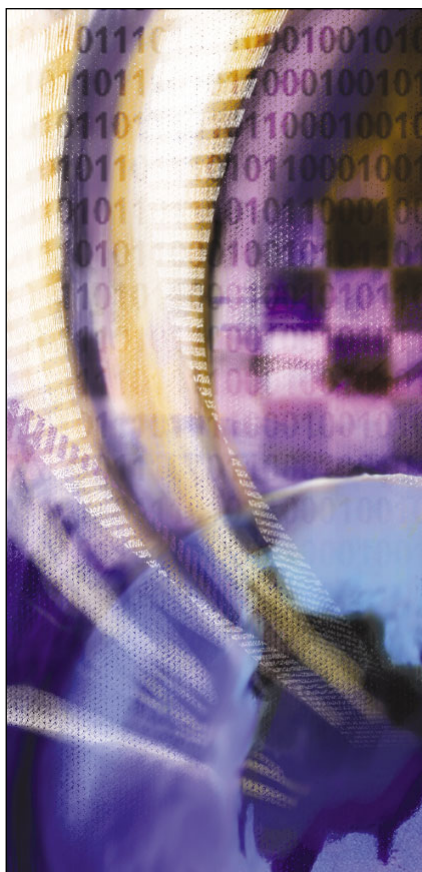
by Carmen Carmack



After you use your PC to set up your Yahoo! Mobile services and sign in, click the My Mobile tab to view and manage those services.

Surfing The Third Rail

Power Lines: The Next Broadband Choice?



You've probably heard of home networking over power circuits using standards such as HomePlug. After you get over the fear of trusting something as frightfully powerful as the electrical outlet on your wall with your precious computer data, you might warm to the idea of networking your computers with it (within the limitations of your power circuit layout).

Consider BPL (broadband-over-powerline) as HomePlug writ large. It's powerline networking that's an order of magnitude greater in scope than the kind you would use to link your kids' PC to your own.

Just as your local phone company may sell high-speed Internet service using DSL on its phone lines, and the cable

company does the same over its fiber-optic Web, a power utility could tool up to offer you broadband over the very power cables that bring massive amounts of electricity to your home or business. After all, the powerline is the last metal cable running to your home that *hasn't* been widely tapped to carry Internet data yet; and it's certainly not as weird-sounding as the experiments in providing BIG (Broadband-in-Gas) or Internet access through metal gas pipes (www.nethercomm.com/headline2.htm).

BPL is the common name for broadband-over-powerline service, which is also called PLB (powerline broadband), PLT (powerline telecommunications), and other names. Some providers in Europe have been experimenting with BPL for a few years. Here in the United States, persons living in Cincinnati, New York City, and Washington currently have the chance to try this interesting option. The growth rate for BPL seems to be slow thus far. In other words, it might not become popular enough to come to your town anytime soon.

We should point out that BPL doesn't appear to be something that mobile computer users or business travelers need to worry about. Even if hotels, airports, or cafes use BPL to provide Internet access to their customers instead of cable, DSL, or another medium, these facilities will still offer Ethernet ports and/or Wi-Fi as links to individual notebooks. In short, you shouldn't need to cart a powerline modem around with your notebook computer in the foreseeable future.

How It Works

A power company's grid of heavy cables carries electricity as sine waves, so the provider must use special equipment to adapt and send digital Internet data. Nearer your home or office, the company uses even more gadgets to

protect and distribute the data as the current transforms to household levels.

In a typical end-of-the-powerline setup for Current Communications in Cincinnati (www.currentcomm.net), a coupler sends the data around a power pole's transformer and filters the signal, a bridge device acts as a gateway router for as many as 16 powerline modems in nearby homes, and a backhaul point aggregates up to 16 bridges as they eventually share access to the Internet. Some BPL providers transmit Internet data wirelessly over the short distance from the power pole to subscribing homes.

In your home, a BPL setup is only slightly different than other types of Internet connections. In fact, BPL cuts down on clutter because you won't need to run a phone line or cable anywhere; all data signals come through the wall outlet, along with the necessary power.

Instead of a cable, DSL, or dial-up modem, you would install a powerline modem. Asoka (www.asokausa.com) is just one company that supplies these modems, which look a lot like a "wall wart" AC transformer. You plug it into an electrical outlet or BPL-compatible surge protector and then route an Ethernet or USB cable between the modem and your

Upshot

- BPL is currently available to subscribers in the Cincinnati, New York City, and Washington areas.
- If you are using a BPL modem, be sure to purchase a compatible surge protector.
- BPL can be vulnerable to interference, just as Wi-Fi sometimes suffers when a microwave oven or 2.4GHz cordless phone is in use.



Asoka sells home networking kits that work with BPL, such as this PL9520-WAP wireless access point.

network hub or your PC's LAN (local-area network) port. Current Communications currently sells basic powerline modems to its customers at reduced prices of \$19.95. Shelling out almost \$50 will net you a powerline modem that acts as a Wi-Fi access point, doing away with the need for a network hub or cables.

Of course, you don't want to subject even a BPL modem to possible damage from lightning strikes and power spikes, so you'll need a surge protector. And as you might guess, the surge protector must be compatible with powerline Internet service; ordinary ones won't work. TII Network Technologies (www.tiinettech.com, www.lightning-shield.com) makes suitable surge protectors, such as the TII 435-D-L-C (\$49.99, but \$29.95 through Current Communications at this writing). The company also sells heavy-duty surge



TII Network Technologies makes BPL-compatible surge protectors, such as this TII 435-D-L-C, and arresters, that protect it from power spikes or lightning strikes.

arresters that a technician can install near your home's breaker box.

After you sign up for BPL and install the modem and surge protector, you should be able to enjoy theoretical maximum Internet speeds comparable to a cable modem's speed (as much as 3Mbps [megabits per second]) under ideal conditions. Current Communications' pricing in the Cincinnati area starts at \$26.95 per month for 1Mbps service.

Controversy

It's unclear just how fast and how wide BPL will spread now that satellite and WiMAX wireless broadband may start to fill the gaps in rural areas cable and DSL don't cover. However, BPL could reach homes in very hilly areas where wireless coverage is spotty, but only if the costs favor it. Local power companies would have to deem it cost-effective to install the necessary equipment to provide BPL.

BPL has the deck stacked against it in another way, as well, in the form of resistance from amateur radio clubs and other organizations, including the National Association for Amateur Radio (www.arrl.org). Many of the detractors assert that the technology could interfere with ham radio sets and communications in the HF and VHF bands. Some people have further claimed that BPL could disrupt certain emergency radio services. Recently, the town of Hagerstown, Md., has met with public resistance to its plan to implement BPL, but "negotiations in regard to a franchise agreement are continuing," according to Hagerstown Light Department Manager Michael Spiker.

Unlike the wiring of a household, aerial power lines are generally bare and unshielded. They're also much thicker than house cables and spaced well apart from each other on a typical power pole or tower. All of these factors make it more likely that aerial power lines might radiate unwanted frequencies (buried power lines don't seem to pose much of a danger), especially when carrying the high-frequency signals necessary for broadband Internet data rates. Granted, people on either side of the debate disagree strongly about the extent of the potential problem.

BPL can be vulnerable to interference, just as Wi-Fi sometimes suffers when a microwave oven or 2.4GHz cordless phone is in use. Some authorities report that hair dryers, appliance motors, and even light bulbs that are loose in their sockets might affect BPL service.

On the other hand, some power companies would like to tap, albeit belatedly, the same data communications market as cable and phone companies did years ago. Some industry claims include benefits to customers beyond the potential for lower Internet service prices thanks to expanded competition. For instance, a power company might use BPL infrastructure to monitor outages and fix some of those outages remotely, which leads to quicker power restoration than what technicians in the field could do. Also, some industry sources claim that BPL could enable more precise and cheaper metering of home power usage, which could lead to price breaks for users who reduce consumption during peak hours.

BPL may not grab your attention like WiMAX, but it's nevertheless an interesting technology. Time will tell whether it lights up more communities or simply goes dark. ■

by Marty Sems

Get More Online

Broadband Over Powerline 2005

www.iqpc.com/cgi-bin/templates/genevent.html?topic=233&event=6906&

How Broadband Over Powerlines Works

computer.howstuffworks.com/bpl.htm

Internet World Stats

www.internetworldstats.com/articles/art072.htm

FCC Broadband Over Powerlines Information

www.fcc.gov/oet/info/bpl

The Sky's No Limit

In-Flight Mobile Phone & Internet Access



For more than a decade, the only option for airline passengers wanting to communicate with the outside world has been the pricey telephone service offered through seatback handsets. However, change is in the air, and a new era of in-flight communication is taking off.

On The Runway

Much to the delight of some fliers, and the dismay of others, airline passengers may eventually be able to use their mobile devices to make voice calls or dial the Internet while in flight. The FCC (Federal Communications Commission) is considering lifting the ban on mobile phone use in airplanes (which was enacted due to concerns about possible interference with

land-based cellular communications). The FAA (Federal Aviation Administration), which placed a similar ban because of potential interference with a plane's navigation and electrical systems, says if the FCC lifts its ban, it will likely follow suit.

More than three years ago, NASA engineers proclaimed the current generation of cell phones safe to use in flight, and Qualcomm and American Airlines conducted a joint, successful test flight over Dallas in July 2004. The current FCC proposal would allow passengers to use standard wireless handsets as long as the phones operate at the lowest possible power setting and do not broadcast unwanted radio emissions.

Even if the FCC and FAA lift their bans, which will not happen before 2006, it will be up to individual airlines to decide if they want to allow in-flight calling and how they will police it.

Cleared For Takeoff

Fortunately, a handful of carriers now offer Connexion by Boeing (www.connexionbyboeing.com), a satellite-based, high-speed Internet access service developed by The Boeing Company. Average downstream connection speed is 5Mbps (megabits per second), about 10 times the

speed of dial-up. After making a connection, passengers can browse the Web, send and receive emails, or set up secure connections to other servers such as those of their corporate networks.

Currently, only international carriers offer in-flight Internet, but some feature it on flights to and from the United States. Additionally, Delta representatives have said the company is considering adopting the technology. In anticipation of eventual high demand, the FCC recently voted unanimously to auction off new spectrum that would be available for broadband data transmission to and from airplanes.

A Sensible Solution?

Is in-flight data and voice communication something the world needs? Certainly, Internet access will be a boon to busy travelers with hours of time to kill. However, in-flight voice calls are another issue altogether.

For business travelers, unregulated mobile phone access could be a nightmare. Imagine how much work you could accomplish, even on a flight with Internet access, if the people around you are talking on their phones the entire time. ■

by Jennifer Farwell

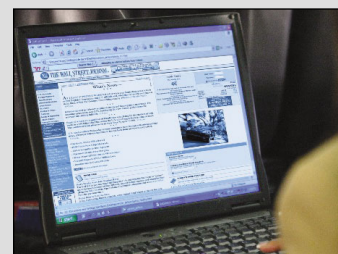
Verizon Airfone: The One & Only Option

In-flight, seatback telephone service never took off as expected, and currently Verizon is the only company that offers it. Verizon Airfone (www22.verizon.com/airfone) is expensive; prices start at \$3.99 per minute for voice (\$1.99 per minute for data) and can run up to \$14 per minute if you are over the ocean.

However, Verizon's Airfone Service for Verizon Wireless takes some of the sting out of in-flight calling. Current Verizon customers who sign up for the service can log into the

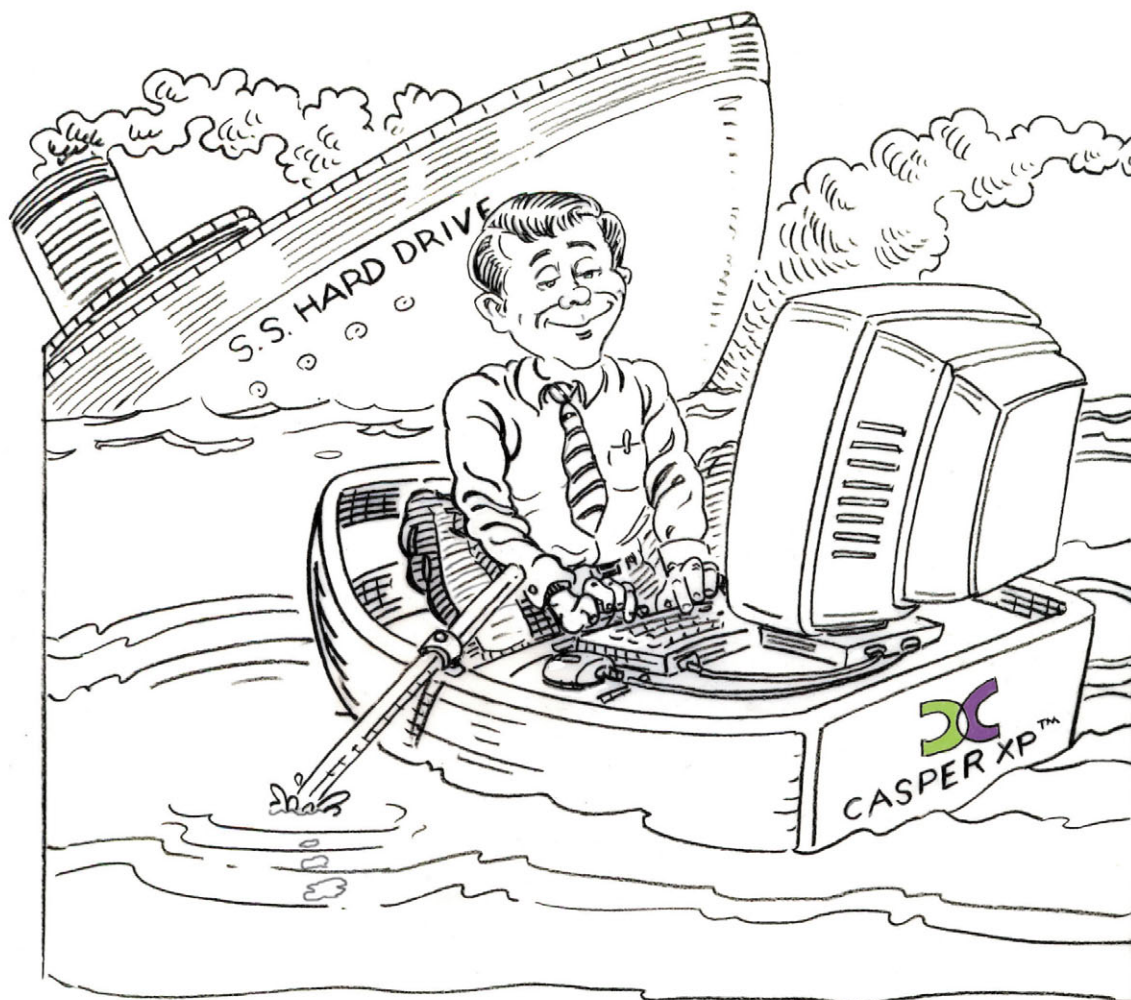
Verizon network using an Airfone handset. They can then receive calls sent to their mobile phone or make outgoing calls, including dialing the Internet. Verizon bills the customers' wireless accounts for all charges; domestic calls are \$0.69 per minute or \$0.10 per minute with a \$10 monthly fee.

Airfone service is available on 2,000 U.S. and international planes. U.S.-based carriers include Delta Air Lines, United Airlines, U.S. Airways, United Express, Continental Airlines, and Midwest Express Airlines. ■



Verizon Wireless customers using the Airfone Service plan and the appropriate connections can dial into the Internet from their mobile phones and share the connection with their laptops.

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Hotspot Sniffers

Tried & Tested Wi-Fi Finders

Hotspots are popping up everywhere. Hotspot finders are handy devices that let you scan for 802.11b and 802.11g wireless networks without booting up your notebook. We tested six of these Wi-Fi-finding wonders, and let you know what to expect from each.

Digital Hotspotter (model HS10)

Canary Wireless has by far the most potentially useful sniffer of the lot. The Digital Hotspotter is equipped with an LCD screen that informs you of a hotspot's SSID (Service Set Identifier), channel data, signal strength, encryption status, and whether the network is open or closed. Pressing and releasing the single button initiates a scan.

Canary's device is the only one that uses AAA batteries, which are an easy find just about anywhere, but the unit suffers for the added dimensions. The Digital Hotspotter weighs in at 2.5 ounces, which also makes it the heftiest unit we tested.

The Digital Hotspotter finished last in our performance tests. Although it performed satisfactorily when scanning for our home access point and the

coffee shop's access point, it failed to identify a usable signal in our office. The office access point is a closed network, but the Digital Hotspotter should have picked it up nonetheless.

Wi-Fi Finder Plus

In addition to the standard 802.11b/g scanning capabilities, Kensington's Wi-Fi Finder Plus features a built-in flashlight and Bluetooth scanning. Pressing the unit's single button once puts it into Scan Mode for searching an area from a stationary position. Pressing and holding the unit's single button engages Search Mode, which continually updates the signal strength with a series of five green LEDs (light-emitting diodes). No signal is signified with a single red LED. Nearby Bluetooth devices are indicated with a lone blue LED.

The Wi-Fi Finder Plus fairly consistently found the nearby access points, though the unit's antenna is directional, which had us spinning aimlessly when we were at the edge of a wireless network.

The compact size, rubberized finish, and stylish design are this unit's

high-points, while the performance was just below average when compared to the other devices.

Wi-Fi HotSpots Finder (model DS2400)

The Wi-Fi HotSpots Finder features five green LEDs dedicated to displaying the wireless network's signal strength. A sixth green LED indicates the unit's power and scanning status. Pressing the Detect button once scans the area for a signal, while holding the button down continually scans while you move.

This unit was our top performer of the bunch, detecting a usable signal in all circumstances, even at 100 feet away from the coffee shop, which stumped four of the six devices we tested. Despite the unit's effectiveness, the green LEDs were hard to distinguish under direct sunlight.

Raytac's Wi-Fi HotSpots Finder has roughly the same surface dimensions as a standard business card and is the thinnest unit we tested. As we went to press, you could purchase the Wi-Fi HotSpots Finder by through numerous online retailers.



Digital Hotspotter (model HS10)

\$59.95

Canary Wireless
(888) 898-0400

www.canarywireless.com



Wi-Fi Finder Plus

\$29.99

Kensington
(650) 572-2700

www.kensington.com



Wi-Fi HotSpots Finder (model DS2400)

\$29.00 (Estimated Street Price)

Raytac
+886 2 8227 5596 (Taiwan)

www.raytac.com

**Wi-Fi Locator (model HWL1)**

\$39.99

Hawking Technologies

(888) 662-8828

www.hawkingtech.com

**Wi-Fi Seeker**

\$29.95

PCTEL

(773) 243-3000

www.pctel.com

**Wi-Fi Trekker (model WFS-2)**

\$29.90

Smart ID

+65 6773 6833 (Singapore)

www.smartid.com.sg

Wi-Fi Locator (model HWL1)

Hawking's Wi-Fi Locator is the largest unit we tested. It has a clamshell design, with a high-gain antenna that flips up to pinpoint nearby hotspots. The Wi-Fi Locator features five blue LEDs for indicating signal strength and an orange "power" LED. Pressing the Locate button once scans the area, and holding the button down causes the Wi-Fi Locator to continually search for the signal's source.

Because this device relies heavily on the directional antenna, it was sometimes difficult to pinpoint the source when at the edge of a signal without rotating 360 degrees. However, it did manage to find a usable signal in most cases and was an average performer compared to the other devices.

Wi-Fi Seeker

PCTEL's Wi-Fi Seeker is the smallest device we tested, measuring just 2.25 x 1.2 x 0.43 inches (HxWxD). The unit's single button can only scan for wireless networks when held down, but the Wi-Fi Seeker was also one of the fastest to display a signal. Four red LEDs indicate signal strength.

PCTEL's device uses a directional antenna, so pointing the arrow of the device toward the wireless signal gave us the best results. The Wi-Fi Seeker finished second in our performance tests, showing a strong or usable signal in most cases.

This unit's size is very keychain-friendly. The lack of additional functionality may deter some users, but the LEDs were the brightest of the devices we tested.

Wi-Fi Trekker (model WFS-2)

Smart ID's newly revamped Wi-Fi Trekker is only slightly larger than PCTEL's Wi-Fi Seeker but comes with a neck strap rather than a key ring. Holding the device's single button down continually scans the area. This device features a unique Auto Scan Mode, which continually searches for a wireless network when you click the button twice.

The Wi-Fi Trekker's small size and sleek design make it one of the few devices that you'd want to be seen wearing around your neck. This unit performed better than average when scanning for the corporate and home access points but had a difficult time locating faint signals. ■

by Andrew Leibman

Wi-Fi Wonders At Work

A Wi-Fi finders' effective range is based on a best-case scenario without interfering signals or structural obstructions. We tested the devices at varying distances away from several access points to determine the device's real-world effective range. The results show the signal strength as determined by the device's display/LEDs. Devices are listed in order of performance.

Model	Wi-Fi Hotspots Finder	Wi-Fi Seeker	Wi-Fi Trekker WFS-2	Wi-Fi Locator HWL1	Wi-Fi Finder Plus	Digital Hotspotter
Manufacturer	Raytac	PCTEL	Smart ID	Hawking	Kensington	Canary
Office Park (indoors 50 feet)	5 of 5	4 of 4	5 of 5	5 of 5	5 of 5	No AP Found
Office Park (indoors 100 feet)	3 of 5	2 of 4	4 of 5	2 of 5	1 of 5	No AP Found
Home Network (same floor as AP)	5 of 5	4 of 4	5 of 5	4 of 5	5 of 5	1 of 4
Home Network (different floor)	5 of 5	3 of 4	4 of 5	4 of 5	3 of 5	1 of 4
Coffee Shop (indoors)	5 of 5	4 of 4	4 of 5	5 of 5	4 of 5	4 of 4
Coffee Shop (outdoors 50 feet)	3 of 5	2 of 4	1 of 5	2 of 5	1 of 5	2 of 4
Coffee Shop (outdoors 100 feet)	2 of 5	No AP Found	No AP Found	No AP Found	No AP Found	1 of 4

Cell Phone Antivirus Protection

Is It Necessary?



Tech news articles are rife with tales of mobile device viruses and other threats, and antivirus companies are rushing to market protective software. Is all the hoopla justified? Do you need to worry about a virus destroying your mobile phone or stealing your data?

As with so many aspects of technology, the answers are No and Yes. Many mobile phone viruses are now “proof of concept,” meaning their makers created them, not with malicious intent, but rather to prove they were possible. Nevertheless, some mobile phone viruses have escaped into the wild, and experts warn that mobile phones, particularly the new generation of smartphones, may increasingly become prime targets.

Where, When & How?

To launch any successful, malicious attack, the invader must have a method of

delivery. Voice communications that do not carry data are impervious to attack. However, now that the same radio waves carrying your mobile phone calls also can carry data, such as multimedia and email messages, the floodgates have theoretically been opened.

Additionally, thanks to the complexity and vulnerability of today’s smartphones, which have PC-like features including the ability to accept Internet downloads and run programs, mobile phones have become more viable marks. The first mobile phone threat, Cabir, emerged as a proof-of-concept release in July 2004. Virus makers posted the code on the Internet in late 2004, and it popped up in the wild in February 2005 on two Nokia 6600s at a California mobile phone store.

Initially compatible only with the Series 60 Symbian OS used by Nokia, Sony Ericsson, and others, Cabir is now capable of attacking phones running the Windows Mobile and NTT Docomo OSes, as well. After installation, the viral worm drains your phone’s batteries and sends itself to vulnerable phones in range. Some variants also delete files from your phone and make expensive phone calls.

Since the release of Cabir, antivirus software companies have identified more than two dozen types of malware (malicious, destructive programs) that target mobile devices. Many of these are Trojan horses (programs that appear to be benign but have malicious intent). Threats include the deadly Skulls.B Trojan horse, which disables every function on your cell phone other than the ability to dial out.

Where’s The Threat?

So why aren’t everyone’s mobile phones under attack? Currently, fewer than 10% of mobile phones in use in the United States are smartphones, so infections are equally rare. Even if you are using a smartphone, you must accept delivery of malicious files or purposefully disable the feature that prompts you to accept or decline an incoming file.

Nevertheless, if you access the Internet or receive MMS (Multimedia Messaging Service) or email messages containing attachments, you could unwittingly accept malicious files. Already some infected MMS messages come with text that suggests they are from a trusted, official source.

Protect Thyself

Given the high level of user involvement required for infection, your basic line of defense is to establish meaningful safeguards. Set Bluetooth and IrDA (Infrared Data Association) to Off in public places and don’t enable features that permit automatic downloads. Do not accept or download any file, not even a ring tone, unless you can verify the source. Be wary of MMS (Multimedia Messaging Service) and email messages containing attachments, although text messages are safe.

Additionally, take a cautious approach to Internet usage. European and Japanese users have reported instances of mobile phone phishing (where crooks trick users into revealing confidential information by directing them to a fake, but authentic-looking, Web site).

Be resolute. Many users whose smartphones became infected with Skulls reported that they repeatedly answered No to the prompt regarding an incoming message but finally clicked Yes when the prompt would not go away. The payoff for their decision was a worthless phone. ■



Symbian-based phones have been the target of most viruses, worms, and Trojan horses to date. This Nokia 6680 displays the menu screen after a Skulls infection.

Additionally, two data exchange technologies, Bluetooth and IrDA (Infrared Data Association) enable mobile phones to exchange data automatically. IrDA is of little concern because it only works in direct line of site and at a range of a few feet. Bluetooth works at distances of approximately 30 feet and is not impeded by walls, jackets, or briefcase covers. If you leave your Bluetooth device set so other devices can discover it, you could easily pick up a virus from a nearby phone at a coffee shop or other public location. (For more on establishing secure Bluetooth settings, see "Bluetooth" on page 40.)

Currently, no mobile phone OSes incorporate built-in firewalls, so once inside, a malicious mobile phone invader could wreak serious havoc. Researchers foresee PC-like worms that will generate messages based on information in your phone and then send themselves to everyone on your contact list. Another concern, already reported in Europe and Japan, is

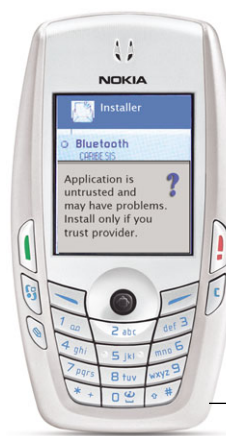
the takeover of mobile phones for use as robots in attacks on other phones or Internet servers.

Time For Protection?

Fortunately, if you have a traditional mobile phone, you have little to worry about. "These guys attack the dominant OSes that are open—on which you can install applications—as well as the ones that are Internet connected," says Todd Thiemann, Director of Device Security and Marketing at Trend Micro (www.trendmicro.com). Consequently, if you have a smartphone (especially one that is Symbian based) with sensitive data on it, installing protection is the most cautious approach.

Trend Micro currently offers free antivirus products for Symbian and Windows Mobile platforms. Additionally, companies such as F-Secure (www.f-secure.com), Kaspersky Lab (www.kaspersky.com), and Symantec (www.symantec.com) offer antivirus solutions for certain Symbian phones.

Each of these products works like traditional antivirus software, scanning incoming and existing files for recognized patterns. Antivirus software installs on your mobile phone just like other mobile applications; you can usually browse to the company's Web site and download the software directly. In most cases you can also download the application to your PC and then sync with your mobile device to upload the software. Most phones will initiate the installation process after a



Users whose mobile phones became infected with Skulls, Cabir, and other malicious threats reported seeing a message prior to installation similar to what you see here. (This screen is computer generated for illustration purposes and not identical to that of a Nokia 6620.)

download completes or as soon as you open the file. (Refer to your phone's users manual for specific instructions.)

An Uncertain Future

To date, malware distribution has been so sparse that the chance of a smartphone picking anything up is remote, even for careless users. Nevertheless, the situation will likely change as smartphone sales skyrocket. (Sales were up 82% in Q1 2005 over Q1 2004, according to Canalys.com [www.canalys.com].) "The threat is driven by the rapid growth in smartphone sales and by the OS monoculture," says Thiemann. "Virus writers go after the numbers—the platforms that are most prevalent in the marketplace. With only the Symbian OS [approximately 80% market share] and Windows Mobile [approximately 10% market share and growing] to focus on, virus writers can do a lot of damage with little effort." ■

by Jennifer Farewell

The Threat Level

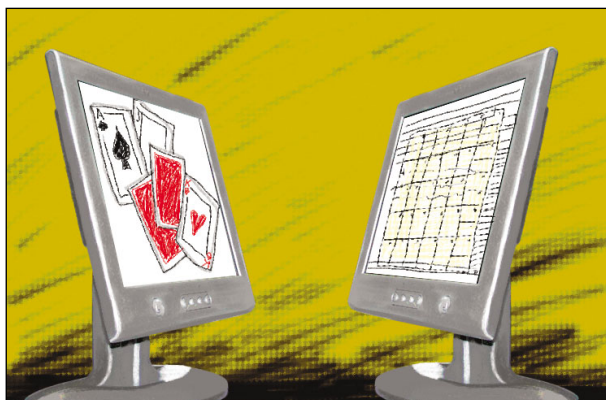
According to a study published earlier this year by Symantec, smartphone users are largely aware of the potential threats inherent with smartphones. Nevertheless, many are engaging in activities that could expose themselves to intrusion.

Awareness & Behavior Of Smartphone Users

Threat Awareness		Damage Potential				Threat Exposure		
73%	70%	55%	37%	28%	41%	56%	46%	32%
Aware of viruses and other attacks	Concerned about possible hacks	Store sensitive information on device	Maintain confidential business data on device	Keep client data on device	Do online banking	Use IM	Access the Internet	Have Bluetooth

Choose A Second Computer

Get The Most PC Out Of Any Budget



If your family PC has turned into your personal business computer, it's time to think about getting a secondary one. Likewise if the kids' instant messaging and games—er, make that homework—are keeping you from returning important email. Whether that indicates a value PC to alleviate the load, or a fantastic power box to entertain you when you're done being productive, is up to you and your budget.

Most of us want a second PC to have features that our main computer doesn't. For example, wireless networking and a DVD burner that can handle 8.5GB DL (double-layer) discs are now cheap enough to be on your must-have list. A PC with these goodies can be surprisingly inexpensive. On the other hand, if you plan to play video games, record TV shows as you would with a TiVo, or transcode movies to travel-friendly MPEG-4s, you'll need a beefier system.

After you clarify what you want, the following list will tell you which parts to pay attention to, in order of importance. Where applicable, we've added some "future-proofing" tips to help your new PC stay relevant longer. Lastly, don't ignore warranty periods.

This list also applies to notebooks, although prices will be higher and options fewer. Also, a slower processor with power-saving enhancements will help

your battery last much longer between charges.

1. Processor

Today's PCs need anti-spyware, firewall, and antivirus protection, so choose a moderately fast processor. Intel's Pentium 4 and AMD's Athlon 64 chips currently provide similar performance and

reliability for the money, as do the rivals' expensive flagship models (Intel's Extreme Edition and AMD's FX series) and value chips (the Celeron and Sempron, respectively). Intel has a slight advantage in encoding audio and video files, whereas AMD leads a little in game speeds.

For Intel and AMD model numbers, higher is better. Intel's rather confusing new three-digit processor model numbering system is described on this Intel Web page: www.intel.com/products/processor_number. AMD's model numbers roughly correspond to Intel P4 clock speeds in megahertz, so an Athlon 64 3700+ should be in the same ballpark as a 3.73GHz (3,730MHz) P4 despite a lower 2.2GHz clock speed.

Likewise, faster is better for an Intel PC's frontside/system bus, such as 1,066MHz over 800MHz, and an AMD computer's HyperTransport link speed, such as 2,000MHz over 1,600MHz. Similarly, the bigger the L2 cache size, such as 1MB versus 512KB, the better, especially for Intel processors. We also recommend a PC advertised as "dual-channel," meaning the CPU can talk to two RAM modules simultaneously for some bonus speed.

Future-proofing: A processor with AMD's AMD64 or Intel's EM64T 64-bit instructions should be able to run

Microsoft's new Windows XP Professional x64 Edition when it's practical to do so.

Dual-core chips, such as the pricy Athlon 64 X2 or P4 D, won't give you any immediate benefits. But over time, as software takes advantage of having two processor cores on one chip (hopefully more than developers embraced the P4's Hyper-Threading [virtual dual-core] feature), it might be nice to have this capability.

2. Hard Drive

Hard drives are easy to choose: Bigger is better. In this era of digital cameras and music downloads from iTunes, consider 80GB your minimum capacity.

Actually, you can boost your PC's speed a little with a couple of cheap upgrades in this area. Choose a 7,200rpm drive over a 5,400rpm one, and an 8MB or 16MB cache over a 2MB one. Some 10,000rpm enthusiast drives are available (Western Digital's Raptors), but they store much less data for the money.

Future-proofing: A SATA (Serial Advanced Technology Attachment) hard drive won't noticeably affect your PC's performance, but it will make it easier to add upgrade years from now.

3. RAM

Here's where some computer manufacturers "get you." They charge a lot more for extra memory than you would pay for RAM modules on your own. Installing RAM is easy, so don't be afraid to get a minimal amount now and upgrade soon afterward if the cost difference favors you. Just be sure to get the correct type of RAM for your computer. Also, stick to a quality brand, such as Corsair, OCZ, or Micron/Crucial. If your PC is dual-channel, replace your two RAM modules with a matched pair of bigger ones.

More RAM is better, although you may not notice any difference between 512MB and 1GB of RAM in everyday use. However, you'll probably feel a drag using 256MB or less on a WinXP system with today's software.

4. Optical Drives

Rewriteable DVD drives are now inexpensive enough to replace CD-RWs in any computer. Nearly all record to CD-R, DVD±R, DL 8.5GB DVD±R, CD-RW, and DVD±RW. Also, any DVD drive will play music, movies, and software on DVDs and CDs.

An intriguing option is LightScribe. After you write a CD or DVD with a LightScribe-compatible disc, you can flip it over to burn a permanent label on the top.

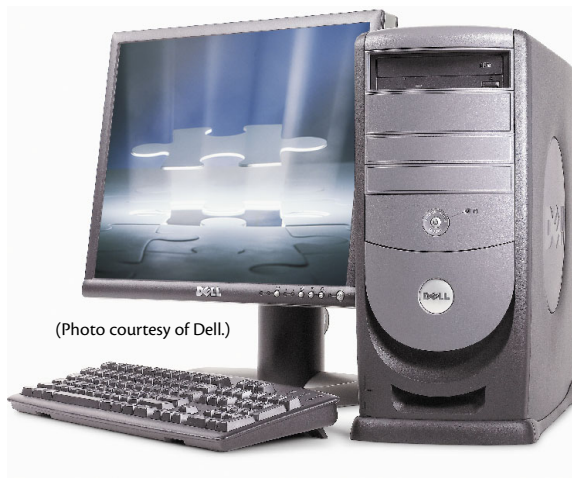
5. Video Card

Any new PC's graphics capabilities are arguably good enough for Web surfing, using Microsoft Office, and light photo/video editing. However, recent games demand more power. A midlevel \$150 to \$200 video card, such as one using NVIDIA's GeForce 6600 GT or ATI's Radeon X600 Pro graphics chipset, should offer reasonable game detail at medium resolutions without making the game too

choppy to play. If you want an all-out, dedicated gaming PC, a card closer to the \$450+ top dogs, such as a GeForce 6800 Ultra or Radeon X850 XT, will let you enable full game detail and high resolutions. (If you're made of money, try two video cards in a PC using NVIDIA's SLI.) Still, a slow processor and puny RAM will hold a fast graphics card back, so get the best you can afford.

Other capabilities you may want from a graphics card include TiVo-like video recording, video capture for importing home movies, and a so-called 10-foot interface that you can read from across your living room when you connect your PC to your television.

Future-proofing: A PC that comes with PCI-E (PCI Express) graphics and expansion slots won't be able to reuse any PCI (Peripheral Component Interconnect) or AGP (Accelerated Graphics Port) cards from your older PC, but it will be more future-proof as PCI-E replaces those older types of slots.



(Photo courtesy of Dell.)

At this writing Dell offered a middle-of-the-road Dimension 8400 with a 3GHz Pentium 4 630 processor, 512MB of DDR2, a 17-inch LCD, and an 80GB hard drive for just \$799.

6. Network Connections

It's now a broadband world. These days, fewer PCs come with dial-up modems, except as options. If you can only get dial-up access where you live, add a modem to your new PC's specs.

To use a cable or DSL broadband connection, or to connect your PCs together with a network router or switch, your new computer will need a LAN (local-area network), or Ethernet, port. One or two come standard on most PCs today. Most move data at 10Mbps (megabits per second) or 100Mbps. Some Gigabit (1,000Mbps) ports can reach much faster speeds if the other devices, cables, and PCs on the network all support Gigabit Ethernet.

Wireless access, such as 54Mbps Wi-Fi G (802.11g), is more important in notebooks than desktop PCs. Still, it can save the day if you put your second computer in a room that you can't easily wire to your network.

Another Benefit

Although you may hesitate to pry open your billfold for a second PC, you'll probably be glad you did the first time it averts a squabble over who gets to use the old computer. Of course, your family may not always agree as to who gets to use the new one. ■

by Marty Sems

What Your Money Will Buy

So what kind of desktop can I get for ... ?" Checking the specials and rebate offers on some quality name brand PCs, here's what we found in four price ranges. (Sources: Best Buy, Sony, Voodoo PC.)

<\$500: \$419.99 eMachines 335 Desktop (T3882); Celeron D 335 processor (2.8GHz/533MHz/256MB); 80GB hard drive; 256MB PC 2700 DDR SDRAM (double-data rate synchronous dynamic RAM); 16X DVD-ROM/48X CD-RW drive; integrated Intel Extreme Graphics 2 (no monitor)

\$500 to \$1,000: \$999.99 Gateway 630 Media Center Desktop (832GM); Pentium 4 630 processor with EM64T (3GHz/800MHz/2MB); 250GB, 7,200rpm hard drive; 1GB PC3200 DDR SDRAM;

4X DL/16X DVD±RW, 48X CD-ROM drives; Intel Graphics Media Accelerator 900 (TV tuner; Windows XP Media Center 2005; no monitor)

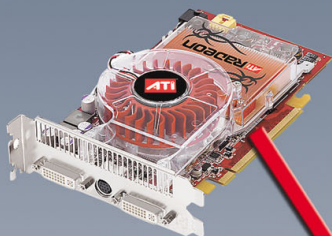
\$1,000 to \$1,500: \$1,249 Sony VAIO VGC-RB38G; P4 550 processor (3.4GHz/800MHz/1MB); 250GB, 7,200rpm hard drive; 1GB DDR400; 2.4X DL/8X DVD±RW, 16X DVD-ROM drives; ATI Radeon X300 (TV tuner; WinXP Media Center 2005; no monitor)

>\$1,500: \$2,924 Voodoo RAGE m:120a Media Center PC; Athlon 64 3500+ processor; 160GB, 7,200rpm hard drive; 1GB DDR400; 4X DL/16X DVD±RW; NVIDIA GeForce 6800 GT (WinXP Media Center 2005; aluminum case with window, lighting; no monitor, keyboard, or mouse) ■

Parts To Ponder

We've highlighted the main items to think about when you're buying a secondary PC. They're numbered to correspond to the sections of this article.

5. Video Card



3. RAM



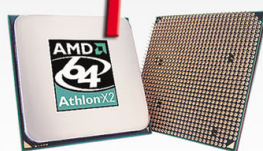
4. Optical Drive



6. Network Connections



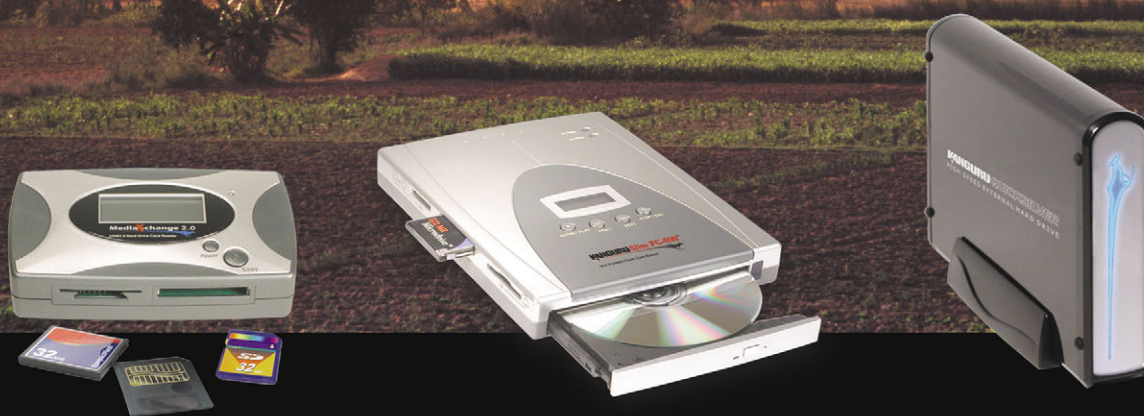
1. CPU



2. Hard Drive



Three wonders every digital camera owner should experience



KanguruMedia X-change

Get up to 80GB of digital photo storage built for the road. When you've filled your media cards but don't have access to a computer, the Media X-change is the perfect solution! Copy your photos right to this mini hard drive with the push of a button!

Features:

- Works with CF, SD, MMC, Memory Stick, and Microdrive
- Built-in Card Reader
- High Speed USB 2.0
- Portable design & custom carry case
- Driverless on most OS

Kanguru Slim FC-RW

Never run out of storage! The Kanguru Slim FC-RW can provide portable backup or archival abilities for your flash cards while on the road! Burn your pictures directly from your flash card to a CD without a computer!

Features:

- Works with CF, SD, MMC, Memory Stick, and Microdrive
- Backup cards over 1GB
- Play DVDs or view pics on your TV
- Connect to your PC via USB 2.0
- Burn CDs, Play DVDS, View Pictures
- Rechargeable battery

KanguruQuickSilver Hard Drives

Run out of room for your photos on your computer? Store them on this sleek, high quality external HD. Excellent performance that looks great on your desktop too!

Features:

- Up to 400GB of storage
- Store thousands of digital photos
- High Performance 7200RPM Drives
- USB 2.0 or FireWire/USB 2.0
- Alloy design dissipates heat
- Withstands up to 200G of shock
- Vibrant Blue Kanguru LED
- Stands vertical or lays flat

Available at:



www.kanguru.com
Call: 888.KANGURU



www.pcconnection.com
Call: 800.800.5555

Photo courtesy of Omar Attum Photography and stored on a Kanguru Media X-change.

"Insert the memory card into the Media X-change, push copy, and the photographs are downloaded. I then transfer the photographs from the Media X-change to my laptop... It's that simple!" - Omar Attum

Got Prints?

Put Your Digital Images To Good Use, Finally



So you finally bought a digital camera, snapped off hundreds of pictures in the first few weeks, and now your camera sits idle, its flash card crammed full of pictures. You yawn. Because after tackling the complexities of the camera itself, you're not quite ready to print and share photos with your friends.

Now's the time to stop procrastinating and start transferring your images to a safe folder on your hard drive. You should also email images to friends and print photos to glossy paper.

Download Mode

There are multiple methods you can use to go from photo files to prints, and the technique you decide upon is largely a matter of preference. You can connect your camera to a USB port, transfer images using a flash card reader, or, with

the right equipment, bypass your PC altogether. Each of these options presents several additional alternatives. Don't let the number of possibilities confuse you; instead, remember that each of these choices simply increases the flexibility of your digital imaging workflow.

Most camera manufacturers include several programs with their products. Typically, you get a basic photo organization program and a driver that helps the computer communicate with your camera. When you want to transfer photos to your PC, you simply use your camera's USB cable to plug the camera into your computer, and the photos on the flash card become available to your PC. Then you have the option to transfer the images to your hard drive. Some systems will go so far as to load your photo organization software, so you can immediately sort your fresh photos.

This kind of automated setup is perfect for novices; however, it does have significant drawbacks. For starters, using your camera for photo transfers kills your batteries in a hurry. Also, it's a pain to wait for your image-sorting software to load every time you connect your camera to your PC, especially if you'd rather work on some other task. And using a camera for transfer purposes is often restrictive because, in most cases, you need your camera's software if you want to connect the camera to someone else's computer.

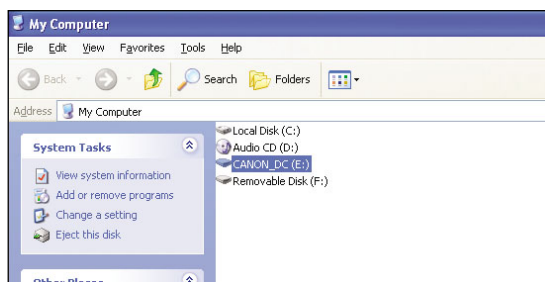
Reader rules. It's much more efficient to transfer images using a flash card reader. You don't need battery power to operate a flash card reader because these

Resizing Tips

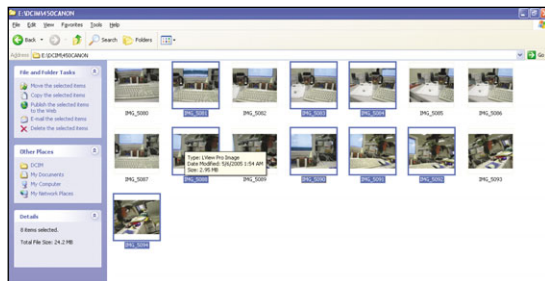
As high-resolution digital cameras become more affordable, more and more users are clogging up the inboxes of their friends and family by sending full-size images via email. You can avoid such a photo-sharing faux pas by learning to resize your images.

Resizing simply means reducing the proportions and size of your file. If you have 5-megapixel camera, the dimensions of the file are approximately 2,592 x 1,944 pixels, and it's very possible that your image files are larger than 2MB each. It takes a lot of extra work from your computer to handle these files, and they bog down email applications, too. With a resizing program, you can reduce the size of the image to 640 x 480, or even smaller, and reduce the file to 50KB or less.

If you're using Windows XP, you can download the Image Resizer PowerToy from Microsoft (www.microsoft.com/windowsxp/downloads/powertoys/xppowertoys.msp). This is a free utility that lets you right-click images and select more suitable proportions, either one image at a time or many images simultaneously. If you're using a different OS or you want a utility with more options, you can install a full-fledged image-editing program, such as Adobe Photoshop Elements (www.adobe.com/products/photoshopshopelwin), or you can choose from a number of free programs found on sites such as Freeware Home (www.freewarehome.com). ■



When you plug a flash card reader into your PC's data port, you will see one or more removable drive icons listed in My Computer.



Flash card readers make it easy to transfer images because you can copy and paste the files you want to your hard drive using Windows Explorer.



Flash card readers, such as this one from Lexar Media, often accept multiple card types. These readers draw their power from the data port, a fact that negates the need for a power cord.

devices get their power from your computer's data port. What's more, card readers often use Hi-Speed USB (aka USB 2.0) or FireWire instead of the slower USB 1.1 connectors found in most cameras, meaning you can transfer your photos much more quickly. Plus, in many cases you don't need software to help the reader communicate with the PC; instead, you can plug the reader into the computer and begin transferring photos in under a minute. These readers rarely cost more than \$30, and they often accept multiple flash card formats.

To use a reader, you connect it to a data port on your PC, insert your flash card, and then use Windows to transfer the files to a new folder on your hard drive. With some OSes, such as Windows XP, your computer should automatically detect the flash card's contents. Then WinXP displays a dialog box that lets you choose a program or utility to help you transfer your images.

With other OSes you have to double-click the My Computer icon on your Desktop and find your images on the

reader, which will appear as a removable drive. If you're using a reader with multiple card slots, you'll likely see more than one removable drive listed in My Computer, but only the drive containing images will have a subfolder where you can access your files.

You can copy and paste the folder to your Desktop or to a folder containing your other photos. Don't save organization for another time; rename the folder immediately with a descriptive name that starts with the date you took the pictures. Doing so will make it much easier for you to locate specific images.

Photo Finale

There's no right way or wrong way to transfer your photos. Whether you choose to use proprietary software for your image processing or you simply use an OS utility is a matter of your own workflow preferences; however, investing in a card reader from a brand-name company can save you time and money. ■

by Nathan Chandler



You don't have to transfer your images to your PC in order to get prints. This Canon camera and printer combo lets you make PC-free prints via a USB connection.

PC-Free Prints

There are numerous ways to make hard copies of your digital images. You can drop off a CD-ROM with images at a developing center, use an inkjet printer, or use a digital photo kiosk.

If you visit one of the thousands of photo-printing kiosks in pharmacies, super stores, and other retail outlets, you can get your prints in just minutes. To use one of these kiosks, all you have to do is take your flash card to the store, insert it into the kiosk, and the machine will load your photos onto its screen. Then you can use the kiosk controls to perform basic editing functions, such as red-eye removal, cropping, and color correction. You can also add borders or captions, create greeting cards or calendars, and with some kiosks, convert a photo from color to black-and-white or sepia.

After you ready your images for printing, you can start the print job. In some stores you have to find a clerk and ask her to enter a password before you can begin printing. And with many kiosks, there's no way to pay instantly, so you have to take your prints to the cashier as you leave the store.

Of course, if you have the right kind of inkjet printer at home, you don't even have to bother with a kiosk. All major inkjet makers sell photo printers with built-in flash card slots, and some of them have small color monitors, too. You can use onboard buttons to perform the same kinds of editing functions you would find on kiosks.

If you have a PictBridge-compatible camera and printer, you don't even need a printer with flash card slots. You simply plug the camera into the printer and use the camera's menu to edit images and start a print job. ■

When Wireless Won't Work



Dave Methvin is chief technology officer of PC Pitstop, a free site that automatically diagnoses and fixes common PC problems. Contact Dave at dave@pctoday.com

Utility Of The Month: USB Flash Drive Manager

With USB flash drives getting so tiny, it's easy to misplace or leave them behind. Also, many of the inexpensive models are easily broken; I've had one of them snap off when I moved my notebook the wrong way. All this danger of loss or damage means you should be keeping backups of any flash drive data to make sure it's safe. Microsoft's USB Flash Drive Manager makes this process simple and it's a free download, as part of the Microsoft Partner Pack at www.microsoft.com/windows/partnerpack.

If you have a notebook PC, or even a desktop PC that's in an out-of-the-way location, it's hard to beat the convenience of wireless access. The July issue of *PC Today* had a great cover story about wireless access, and that's the place to start if you are new to the wireless world. Use wireless access long enough, though, and you'll come across one of those nightmare scenarios when wireless won't work. Here are a few things that you should try before giving up and looking for an Ethernet jack.

Strength In Signals

Usually it's pretty clear when your wireless signal is weak. The wireless System Tray icon will show very few bars and it will show a signal strength of "low" when you hover the mouse over the icon. I can admit that a few times I've had my notebook pressed to the hotel window, trying in vain to eke out enough signal strength from the public library building across the street.

A bad signal can be due to attenuation, interference, or both. Attenuation is caused by the signal having to go over a long distance or through solid objects, such as walls. The outside walls of my house have insulation with a foil backing, which acts as an awfully strong barrier to wireless signals. The signal is great as long as I

stand at a window. I guess the good news is that my neighbors won't find it easy to spy on my network activity. Signal strength can also be increased by using a wireless repeater, bridge, or range extender; all three terms are used but they basically mean the same thing.

Another way to deal with a weak signal is to use an external antenna. A Google search for "cantenna" will show you several commercial and home-built alternatives for wireless network antennas that can boost signal strength. The advantage of these antennas is that they can be very directional, concentrating their signal in a particular direction. Some experimenters have been able to send wireless signals several miles across open areas using a directional antenna. I should note that a home-built antenna may not comply with FCC rules regarding signals and interference, so you may not want to take that route if you have a lot of nearby neighbors.

The catch about an external antenna is that many wireless devices don't have connectors for external antennae nowadays. Usually you can remove the wimpy standard antenna on an access point or repeater and replace it with an external one. The problem is on the other side, with notebook PCs for example. Nearly all

notebooks that have built-in wireless do not provide any type of external antenna connector. If you use a PC Card for wireless access, though, it's a good bet that the card offers a connector that you can use.

When it comes to interference, you have some other options. In some areas, there may be several wireless networks operating and they are interfering with each other. If you're in control of the wireless access point and can reconfigure it, choose a different channel for the access point. That may help if there are multiple access points near each other and their signals are colliding. The other possibility is that there are other devices using nearby frequencies. The 2.4GHz frequency range used by wireless networking is also used by some cordless phones, baby monitors, and wireless video cameras. If any of those are being used, try turning them off to see if it helps.

Enabling The Network

Many notebooks that offer wireless access also have some way to quickly disable wireless using a physical switch or button on the notebook. My Gateway notebook does this with a button near the power switch that glows blue when the wireless network is enabled. Press the button, and wireless networking is

turned off, along with the blue light. I've also used a Fujitsu notebook that used a simple slide switch on the back edge to do the same thing. The problem with these buttons is that you can easily hit them by mistake and it may be unclear why the network stopped working. The notebook simply reports that the wireless network isn't operating, but why? (I wish it would say "Check the button, silly.") So even though this may sound as silly as the "Is it plugged in?" question that tech support asks, check if your notebook has a wireless network switch and that you have turned it on.

The sleep and resume features of a notebook are part of its coolness. I often go for weeks without actually turning off or rebooting my notebook, and usually when I do it's because I have to install a security patch of some kind. Occasionally, though, the hardware will get into a confused state with all those sleep-and-resume cycles. That can cause the wireless network to stop working. If that happens, first try to clear the problem by resetting the network. Right-click the My Network Places icon, select Properties, and then find Wireless Network Connection. Right-click that entry and select the Disable option; wait for its status to change and then select Enable. You can also

try the Repair option. If the wireless still seems broken, a quick reboot may clear up the problem.

Tell Everyone, Why Don't You?

When you're out and about using public wireless networks, you should be aware that anyone in range is able to pick up your Internet traffic. That can be a risk if you are doing things like checking your mail with a POP3 mail client that sends your username and password across the network without any sort of encryption. If you are dealing with information that may be personal or sensitive, you should use some sort of security over wireless networks. One option is to use a Web server with Secure HTTP, often called HTTPS; this encrypts the information before it goes over the wireless network. This choice only works if the server you are trying to contact supports HTTPS; most banks and financial services, such as PayPal, do use it.

Another option for security is a VPN (Virtual Private Network), which is often used when you want to connect with a business network back at your office. To use a VPN you'll need VPN-aware software on your own PC, plus a firewall at the office that can accept VPN connections. Setting up a VPN and making sure it's secure can

be tricky, so it's usually handled by the IT department inside the company.

Follow-Up: Iconified Flash Drives

In my June column on using mount points to manage removable storage, I mentioned that I hadn't found a way to change the icon that displays for the mount point. Fortunately, reader Frank Golden is more persistent and crafty than I am, and figured out a way to do it. Here's Frank's technique:

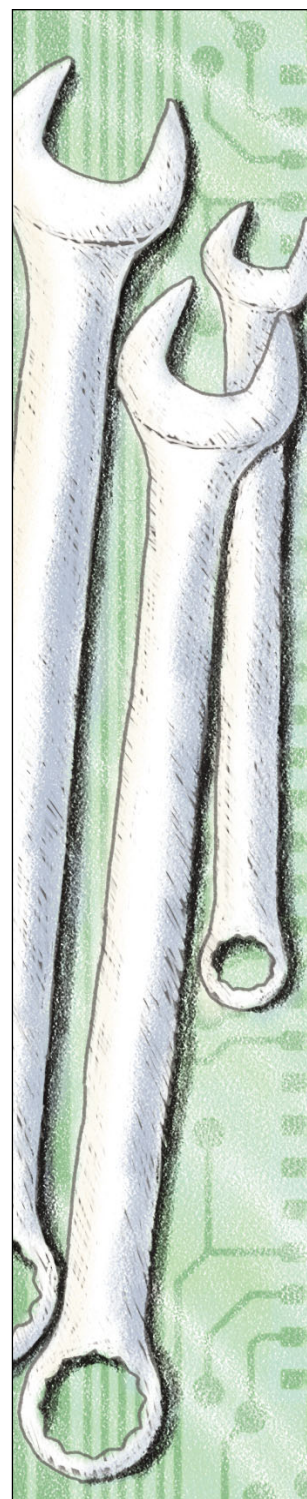
Instead of desktop.ini file, use an Autorun.inf file. Using Notebook, create a two-line file like this:

```
[autorun]
Icon = .\youricon.ico
```

Save the file as Autorun.inf and put in the root of the mounted flash drive; also copy the icon file you want to use (named youricon.ico in this example) to the root of the drive. I use Windows XP Service Pack 2.

I tried Frank's procedure and it works like a charm. When the flash drive isn't plugged in, the folder sports a normal yellow folder icon. As soon as it's plugged in, the icon changes to the one named in the Autorun.inf file. It's just what I was looking for. Thanks, Frank! ■

by Dave Methvin



The Latest Software

Roxio Easy Media Creator v7.5

\$99.95

Roxio

www.roxio.com

Easy Media Creator made a big splash last year by becoming a popular solution for managing media. Now, with version 7.5, EMC gives you the power of a tidal wave to manage digital media.

You can still use EMC to burn CDs, edit photos, and edit digital videos from your camcorder. Now with several additions from Sonic, which acquired Roxio last year, EMC is an even more comprehensive solution.

First among the Sonic additions is MyDVD Slideshow, which lets you create DVD-compatible slideshows from still photos, complete with background music and transitional effects. Now you can share slideshows of your children, travels, or historical family photos with loved ones—and they won't even need a computer to view them. Once you've created the slideshow and added effects, just burn it to a disc. It's playable on a standard DVD player.

Other new DVD tools include CinePlayer, which enables you to play DVD movies and games at a higher

quality; DivX-to-DVD conversion; and DVDInfo Pro, a tool for testing drives and media. That's in addition to Roxio's DVD Builder, the DVD-authoring tool.

Another nice enhancement is the LP and Tape Assistant. Many of us older folks have favorite tapes and LP records that, for one reason or another, haven't been released on CD as of yet. This assistant helps streamline the process of digitizing and cleaning up tapes and LP recordings, complete with diagrams for connecting your turntable or tape deck to your computer (sound card required). The Easy Audio Capture Utility records and cleans up audio such as Internet radio, and the enhanced Sound Editor lets you create custom mixes.

EMC 7.5 also includes Sonic's Backup MyPC Deluxe to protect and preserve data, as well as a Disc Image Loader that mounts disc images as a virtual drive to ease disc change requirements of programs, particularly games.

Add PhotoSuite photo editor/publisher and VideoWave video editor to the DVD, audio, backup, and disc-burning features of EMC, and the array of media tools becomes even more impressive.

Then when you consider the \$99.95 price tag, purchasing Easy Media Creator becomes a no-brainer. Owners of version 7 can upgrade for \$29.95 direct from Roxio.

Punch! Professional Home Design Suite, Platinum v8.0

Free 15-day trial, \$99.99

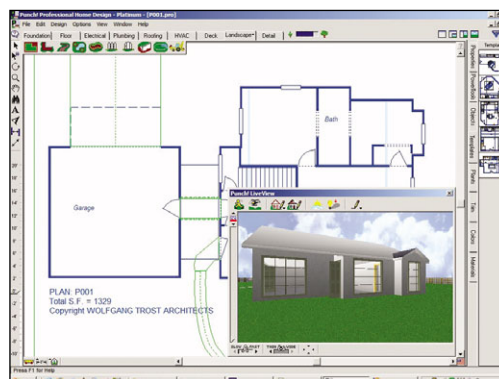
Punch! Software

www.punchsoftware.com

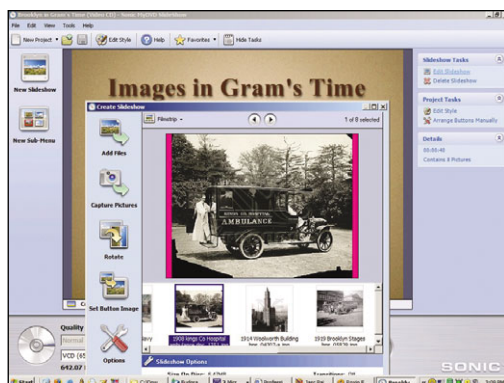
So you want to update your home or landscape? Save yourself some money and get two home

design programs in one package. PHDS (Professional Home Design Suite) from Punch! Software includes both a landscape/deck designer, as well as home designer/remodeling program. Master Landscape Design helps you plan landscaping changes and includes Ultimate Deck, the suite's deck design software. Professional Home Design Suite designs all areas of the home, including foundation, HVAC (high-voltage alternating current), electrical, and plumbing planners.

PHDS is based on the same platform as Punch!'s Architectural 4000 series, letting you create professional, accurate plans



Punch! Platinum Home Design Suite lets you create and visualize professional home design and landscape plans from its extensive library of elements.



Roxio's Easy Media Creator includes the ability to create DVD-playable slideshows, in addition to its CD burning and photo- and video-editing features.

and designs. Additionally, PHDS includes a 3D graphics engine to create a photo-realistic walk-through of your project.

PHDS offers a 15-day, limited-feature trial. The trial is enough to let you know that this product is professional grade and isn't for the casual user. Whether creating home remodel designs or landscape designs, it requires measurements of walls and property lines. You can import a photo of your existing home or landscape, add design embellishments, and then view the results.

The deck designer includes wizards to step you through the process of

creating simple or complex multilevel and/or multistory decks, choosing railing or baluster options as you go. Then, landscape around the addition, choosing from over 2,000 plants, trees, and shrubs in the Plant Finder catalog.

Punch Professional Platinum can be tricky to use at first but is an excellent value for helping to visualize significant changes to the interior or exterior of your home.

Webroot Spy Sweeper v3.5

Free 30-day trial, one-year subscription
\$29.95
Webroot Software
www.webroot.com

Protecting your identity and maintaining privacy has become one of the biggest concerns to Internet users. No one spyware sweeper does it all; the best protection means having a few anti-spyware applications on your system and running them at least once a month. Therefore, adding Webroot Spy Sweeper to your arsenal is a smart decision.

Spy Sweeper isn't the fastest scanner, but it scans thoroughly for spyware and malware. Though it's faster to start it up just before you go to lunch and let it scan during the idle time, you can continue to work on your computer as Spy Sweeper scans in the background. It also minimizes to the Windows Taskbar, so it doesn't compete with your other applications for space.

Spyware protection, like antivirus protection, requires regular updates to a

definitions file. This keeps your computer protected even as new spyware and malware is created. The cost of a one-year subscription is \$29.95, a moderate price for updated protection in a nice, modern Windows interface.

Spy Sweeper's main advantage is that it offers real-time spyware blocking, called shields. These are effective in stopping infestations before they occur. Shields run in real time and notify you when changes are being made to your system. You then have the opportunity to accept or reject the change, such as a change to the Startup page in Internet Explorer. In this regard, Spy Sweeper includes some of the benefits of a software firewall, for less than \$30 per year.

This real-time protection does take up a bit of memory to run, but most recent PCs shouldn't have a problem. We saw minor performance degradation only when running multiple graphics-intensive programs. This protection is a more-than-worthy trade-off. Those with PCs that have memory problems already may want to consider turning off the real-time shields.

MatchWare Mediator 8 Std

\$69
MatchWare
www.matchware.com

Home users can get professional results with Mediator 8 Standard. Whether you're showing off your newest collectibles or the latest antics

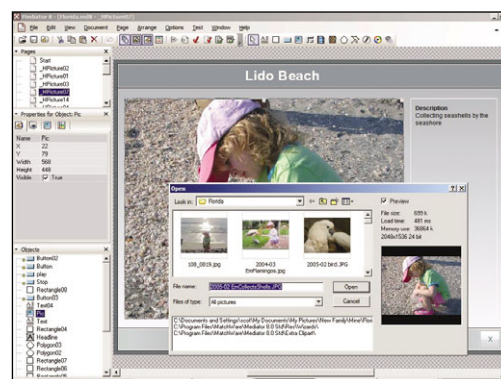
of your children, creating multimedia presentations on a budget is easy. Mediator 8 Std contains just the right features to streamline the process of combining images, video, and text effects into auto run CD-ROM presentations.

The included templates make it easy to get started. We also recommend viewing the video tutorials. (The tutorials are in WMP format; download them from the Mediator Web site.) Between the two, we created our first presentation in about 20 minutes.

There's no programming involved to assign actions to buttons. You can use drag and drop to program a presentation to continue to the next page when the viewer clicks a button, for example.

Version 8 also includes a multimedia catalog that includes multiple page and navigation templates, plus resizable buttons and vector-base illustrations. The program also includes a large clip-art library with dozens of images, including graphics, buttons, and animated GIFs. A spell checker is another new feature in this version.

Mediator's biggest attraction, however, is the ability to export presentations as HTML or Flash (SWF format) animations. If you've ever wanted to spice up your Web site with pictures from your last vacation, Mediator lets you create an interactive feast of pictures, text, and video. Then, with the click of a button, export it in a format



Mediator 8 Std's templates, wizards, and clip-art catalog jump-start the process of creating interactive multimedia presentations.



Webroot Spy Sweeper protects your computer with up-to-date spyware detectors and real-time shields with firewall-like functionality.

that can easily be published to your Web site and viewed by family members.

Mediator 8 Std is a rather specialized program and isn't a must-have for most users. Most of us at one time or another, though, have felt the urge to show off a bit for our friends and family. At only \$69, Mediator gives you the ability to create fancy multimedia presentations without having to be a programmer. So feel free to make a splash. 📸

by Cyndy Bates-Finnie

Play Hard

A Look At What's New In PC Gaming

Doom 3: Resurrection Of Evil once again thrusts players into the role of a battle-hardened 22nd-century space marine. The UAC (Union Aerospace Corporation) has established a new archaeological dig site on Mars. Apparently the cataclysmic events of the original Doom 3 haven't deterred the UAC from poking around Martian soil for alien artifacts.

Predictably the UAC finds a fascinating alien artifact, which is (also predictably) dangerous and best untouched. Defying all common sense, though, someone touches it. Everybody dies, and a portal opens through which legions of hellish, fire-spewing demons spill through to our dimension and raise hell.

Despite the mind-boggling lack of common sense leading to the events of Doom 3: Resurrection Of Evil, it is still a creepy, welcomed trip back to Mars and the UAC dig sites deep within the Martian soil. Aside from some new weapons and monsters, Resurrection Of Evil doesn't offer anything new to the Doom 3 experience. So as long as you enjoyed the dark, claustrophobic, and taut atmosphere of the first game, you'll enjoy the expansion pack just as well. This new chapter is just as creepy and fun

as the original game, though about half as long (10 to 12 hours). The shorter length actually works to the expansion pack's advantage, maintaining a tighter story and pace than the original Doom 3.

New weapons include the double-barreled shotgun and Ionized Plasma Levitator, aka the Grabber. The double-barreled shotgun packs a huge punch; it's perfect for taking down almost any enemy in a single blast at close range. The Grabber is clearly inspired by (or ripped off from) the gravity gun in Half-Life 2. The grabber picks up small to medium-sized objects (crates, barrels, exploding barrels, etc.) and hurls them. The Grabber can also grab the fireballs hurled at you by demons, and hurl them back at your enemies.

The final new weapon is the alien artifact itself, which gains new powers as you defeat the boss monsters in the game. The first power slows time, creating a bullet-time effect for a few seconds. The artifact gains additional powers as you progress through the game, such as Berserk (increases your damage) and Invulnerability. The artifact is powered by souls, and holds three souls (uses) at any one time.

New enemies include large, lumbering brutes with rocket launchers for hands, and the Vulgar, which is essentially a Doom 3 Imp on steroids that shoots blue-green fireballs. There are also three new bosses in the game, but we won't give away anything here about them. Suffice to say you'll

do a little simple puzzle solving, and plenty of practice circle-strafing and using the alien artifact to bring them down.

The graphics are still hands down the creepiest, most organic and amazing visuals we've seen in a shooter. It's a pity so much of the game is spent running, around in dark, confined spaces, backpedaling and spraying ammunition. We were so busy running and screaming that we could never take a nice long look at the game's critters up close. Lighting and darkness are still used very effectively, and the game elicited at least a couple startled jumps out of us just before the screaming and backpedaling started.

Sadly, our new protagonist in Resurrection Of Evil still lacks any form of night vision, or even duct tape for attaching a flashlight to a weapon. We still find it hard to believe our intrepid, futuristic space marine lacks a better method for seeing in the dark than a flashlight with unlimited battery life, but we're willing to suffer the contrivance because it's used effectively. The weak-kneed may need to change underwear at least once while playing this expansion (more than once, and we recommend you find something else to play. Try Bejeweled).

Resurrection Of Evil also includes some new multiplayer maps. There are four new Deathmatch maps, and a new Capture the Flag mode has been added. Unfortunately, multiplayer games are still limited to a paltry eight players.

Overall, Doom 3: Resurrection Of Evil is a fun and welcome romp. If you enjoyed Doom 3, buying Resurrection Of Evil is a no-brainer. **I**

Doom 3: Resurrection Of Evil (Expansion)

\$29.99

Activision

www.activision.com

Rated M (Mature)

System Requirements:

Windows 2000/XP; 1.5GHz Pentium 4/Athlon XP or faster; 384MB RAM; 8X CD-ROM drive; 630MB hard drive space; DirectX 9.0b-compatible 64MB 3D video card; DirectX 9.0b-compatible 16-bit sound card; broadband Internet connection for multiplayer play.

DOOM³
RESURRECTION
OF EVIL

BROTHERS IN ARMS ROAD TO HILL 30

Home Base

First-person shooters based upon WWII have enjoyed significant popularity in the last few years, fueled by outstanding titles like Electronic Arts' Medal Of Honor and Activision's Call Of Duty. It would be easy to think that the genre is spent and the stories exhausted. Then a game such as Brothers In Arms: The Road To Hill 30 appears, proving there is plenty of life left in the genre and that the stories of WWII never cease to captivate us.

Brothers In Arms: The Road To Hill 30 puts you in the role of Sergeant Matt Baker of the 101st Airborne division of paratroopers. Just before the invasion of Normandy, Matt and his platoon parachute into France, ending up scattered all over the countryside—exactly as it happened in history. Matt reunites with some of his men, and the rest of the game tells Matt's story.

Squad-based tactics are the key feature that sets Brothers In Arms: The Road To Hill 30 apart from its peers, Medal Of Honor and Call Of Duty. Whereas the latter are both excellent first-person shooters, they are played from a typical, first-person viewpoint. Brothers In Arms, however, is a squad-based shooter, in which you must coordinate and command a squad of men (and occasionally a tank) to achieve your objectives.

To assist you in making tactical decisions, a special visual mode called the Situational Awareness View can be called up. Situational Awareness View pauses the action and provides a bird's-eye view of the terrain and enemy locations. Information in the Situational Awareness View is based on military intelligence, augmented by any enemy positions you've discovered through reconnaissance. The information isn't always 100% accurate, but you can use it to plot the best course of assault against enemy positions.

Your squad and effective tactics are vital to success. Thanks to the excellent AI in the game, allies and enemies fight intelligently, always using cover and fighting as though they actually don't want to die. Taking out entrenched enemies usually means ordering your squad to provide suppressing fire while you move into a flanking position. A red dot over an

enemy's head gradually turns grey as they are suppressed, forcing them to take cover and giving you time to flank them, attack from surprise, toss a grenade, or charge their position.

Like other WWII shooters, all the weapons and vehicles in the game are authentic WWII weapons. Fans of the genre should recognize familiar Allied and German weapons, a small sampling of which includes the M1 Garand rifle, .45 semiautomatic pistol, the M1A1 Submachine gun, the MP40 Machine Gun, and the MP44 Sturmgewehr Assault Rifle. Because Brothers In Arms focuses on a realistic portrayal of WWII, you can only carry two rifles, a pistol, and some grenades at any given time. You are also equipped with satchel charges for destroying enemy gun emplacements and other targets.

Multiplayer play is unique: Up to four players can compete on ten different objective-oriented maps. Each player commands his or her own squad. If you die, you can take over a member of your squad, but if everyone dies, you and your entire squad will respawn at your original starting location.

Brothers In Arms does an excellent job of telling its story. The graphics, sound, and environments are all outstanding and create a truly immersive environment. More importantly, Brothers In Arms boasts truly unique features that set it apart from its peers. If you're looking for the next great WWII shooter, Brothers In Arms: The Road To Hill 30 is it. ■

Brothers In Arms: The Road To Hill 30

\$49.99

Ubisoft

www.ubisoft.com

Rated M (Mature)

System Requirements:

Windows 2000/XP; 1GHz Pentium III or AMD equivalent CPU; 512MB RAM; 32MB DirectX 9.0c-compatible video card; DirectX 9.0c-compatible 16-bit sound card; 4X DVD-ROM drive; 5GB hard disk space, broadband for Internet play.

PSYCHONAUTS

Reduced to the sum of its parts, Psychonauts is a simple platform game that is comprised of the elements common to platform games: There are lots of jumping/movement-based challenges, enemies and boss monsters to fight, and collectible items which add new powers and abilities to your in-game persona. However, while Psychonauts is built on conventional platform mechanics, the game experience, presentation, and quality of the story drive Psychonauts head and shoulders above its peers.

Psychonauts thrusts you into the role of Rasputin (Raz), a young, talented psychic boy dreaming of becoming a Psychonaut, which is basically a psychic secret agent. Raz sneaks away from his former life as a circus performer and into the Whispering Rock Psychic Summer Camp, a psychic training camp for youngsters.

While the premise may sound initially serious, Psychonauts is anything but. This is immediately apparent courtesy of the game's strikingly odd, cartoonish qualities. Visually, Psychonauts looks something like the marriage of a Nickelodeon cartoon with Tim Burton's "Nightmare Before Christmas." This isn't surprising considering that Psychonauts is the brainchild of Tim Schafer, the man responsible for the stylish and funny PC games Grim Fandango and Full Throttle, both published by Lucas Arts in the 90s.

The characters are wild and varied. Some are simple and cartoonish, while

others are bizarre, creepy, or both. The outdoor environment of Camp Whispering Rock (the real world) is brightly colored and cheery, looking just as a summer camp should. However, Raz must frequently venture into the psyche of various individuals, at which point the gloves come off and anything goes. The training level (Basic Braining), for example, looks like a war zone inside of a carnival haunted house. Every mental world has a different (but equally bizarre and captivating) visual style.

Psychonauts plays much like a free-form adventure game. In the real world, Raz is free to explore and interact with his fellow camp mates, in addition to pursuing optional side-quests and hunt for objects (more on those below). Eventually, you will need to venture into the mental world of many different characters, which is where most of the platform action takes place.

For a game largely built platform mechanics (jumping puzzles, combat, and collecting items), Psychonauts provides a considerable array of different items to collect and use. There are so many items in the game it would be impossible to cover them all here. Many of the items (Figments, Psi Cards, and Scavenger Hunt items) are gathered purely to increase Raz's Psi Cadet Rank, which is important because gaining certain psychic powers (and improving them) is based on this rank. There are also the typical health power-ups (Brains,

Mental Health, Dream Fluff), and some items (Emotional Baggage and Memory Vaults) that unlock little extras in the game.

As Raz completes challenges set forth in the game, he will gain Psi Cadet Ranks and also earn Merit Badges. Merit Badges grant Raz new Psychic powers. Raz begins with a simple psychic punch, and eventually adds Pyrokinesis, Telekinesis, Invisibility, Marksmanship (his first ranged psychic attack), Levitation, Shield, Clairvoyance, and Confusion to his list of powers.

In addition to his considerable arsenal of powers, Raz can jump, climb, shimmy along ledges, walk tightropes, use trapezes, and navigate both the real and mental worlds just about every way imaginable.

There is so much to talk about (and rave about) in Psychonauts there just isn't enough space in this review. Psychonauts is outstanding in every respect, and that extends to two features that often suffer the most when a console title is released as a PC title: Control and Save Games. Psychonauts controls very well with a mouse and keyboard, and you can save a game at any time and any where you want. Combined with the outstanding and stylish visuals, a funny and inspired script, and some of the best action-platforming available on the PC, Psychonauts is an easy title to recommend. **I**

System Requirements:

Windows 98SE/2000/XP; 1GHz CPU; 256MB RAM; DirectX 9.0c-compatible video and sound card; 600MB hard drive space; 16X CD-ROM drive.

Psychonauts

\$29.99

Majesco

www.majesco.com

Rated T (Teen)



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Network Connection Problems



As a mobile computer user, you have a unique challenge when it comes to connecting to a network or the Internet. Your connection method can change on a daily basis. If you're really well-traveled, your connection may even change on an hourly basis.

Considering all the possibilities, it's a bit surprising that problems don't crop up more often than they do. Below are some of the more common problems and a few ways to tackle them.

Ethernet Cables

A loose or bad cable is often the cause of a lost Ethernet connection. As a mobile user, you should always keep a spare Ethernet cable in your toolkit. If your laptop's link or activity light isn't active, the cable may be bad. Replace the cable and try the connection again.

DHCP Connections

The most common wired Ethernet configuration, for both home and work, is a DHCP (Dynamic Host Configuration Protocol) server that automatically assigns

IP (Internet Protocol) addresses. This is perhaps the simplest connection method, as well as the least likely to cause problems. When you connect to an Ethernet network with DHCP, all of the essential properties are automatically configured for you.

If you cannot connect using DHCP, there are two common possible problems and they share the same solution. Your laptop may be holding onto an old IP address or other configuration parameters assigned from a previous connection or your laptop can't find the DHCP server and is using a self-assigned IP instead. To remedy either problem, you can force your laptop to release and renew the configuration information.

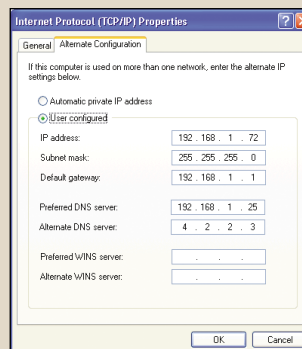
In Windows XP, right-click My Network Places, either on the Desktop or in the Start menu, and select Properties from the pop-up menu. Right-click the Local Area Connection icon and select Status from the pop-up menu. Select the Support tab and click Repair. This will release and renew your IP lease, flush your DNS (Domain Name Server) cache, register your connection with the DNS service, and perform a few additional housekeeping tasks.

You can perform the equivalent tasks in earlier Windows versions using the WINIPCFG command. Click Start and select Run. In the Run dialog box, type

`winipcfg` and then click OK or press ENTER. In the IP Configuration window, click the Release button and the Renew button and then click OK. If you have multiple network adapters, you can use the Release All and Renew All buttons to perform a Release/Renew cycle on all network connections at once. If you still have problems, try the sequence again and then reboot your laptop.

Static IP Connections

If the network you're trying to connect to uses a



Windows XP allows you to create an alternate Ethernet configuration. The Alternate tab is only available when the primary Ethernet connection is configured for DHCP (Dynamic Host Configuration Protocol) assigned IPs (Internet Protocol).

static IP, you will need to manually configure your laptop. You must enter the IP, Subnet mask, and Gateway/Router IP information. If any of this information is wrong, you will probably not be able to connect. The best way to avoid problems with incorrect information is to

avoid changing your network settings every time you change locations. Chances are you don't have this information handy; you'll have to obtain it from your IT department or ask them to configure the settings for you.

WinXP has built-in support for two Ethernet network configurations; however, one of the configurations must use a DHCP server, and the other must use static or self-assigned IPs. To configure WinXP for two Ethernet configurations, right-click the My Network Places icon and select Properties from the pop-up menu. Right-click the Local Area Connection icon and select Properties from the pop-up menu. Select the General tab, double-click the Internet Protocol (TCP/IP) option, and then select the Obtain An IP Address Automatically option. Select the Alternate Configuration tab and then select the User Configured option. Enter the appropriate IP address, Subnet mask, Default gateway, and DNS and/or Win server addresses, and click OK.

WinXP will now automatically switch between the two configurations as necessary to make a connection. All you will need to do is plug in the Ethernet cable and boot your computer.

Earlier Windows versions don't support the alternate configuration option, but there are third-party programs available that can add multiple configuration

support for your Ethernet connection. Some notable possibilities include NetSwitcher (\$14; J.W. Hance; www.netswitcher.com), Select-a-Net (\$15; Digerati Technologies; www.select-a-net.com), and IPSwitcher (Basic \$20, Pro \$30; Softmate Corporation; www.ipswitcher.com).

DNS

If you can connect to your local network but not the Internet or some local network services, then it's probably a DNS issue.

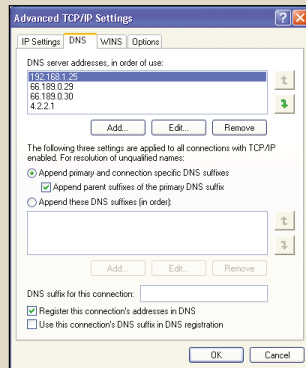
When your Ethernet connection is via a DHCP server, the DNS information should automatically be configured correctly for you. However, some networks prefer that DNS information be configured manually. You can add the DNS servers you use at home and at work to the DNS list.

Windows 2000/XP. Right-click the My Network Places icon. Right-click the Local Area Connection icon and select Properties from the pop-up menu. Double-click the Internet Protocol (TCP/IP) entry. Click the Advanced button and select the DNS tab. Click the Add button, enter the DNS address(es) provided by your ISP or IT department, and click OK.

Windows 98/Me. Right-click the My Network Places or Network Neighborhood icon on the Desktop. Select the Configuration tab and double-click the TCP/IP adapter line item. Select the DNS Configuration tab. Choose the Enable DNS option, enter the DNS address in the field next to the Add button, and click OK. Repeat to add other DNS addresses, if any.

Wireless

Like many portable devices, laptops are susceptible to loose parts. Before trying anything more complicated or time consuming, remove and reinsert the wireless



Having more than the two default Name Servers on the DNS (domain name server) list gives you a wider selection of available Domain Name Servers and a better chance of being able to connect to a server from any location.

card. If your card uses an external antenna, check to be sure the antenna cable is securely connected to both the card and the antenna.

New improvements in wireless features and performance are always popping up. Because of this ever-changing landscape, be sure to keep your wireless drivers up-to-date to help reduce or eliminate problems that can occur when a wireless network uses features that an older wireless driver doesn't support.

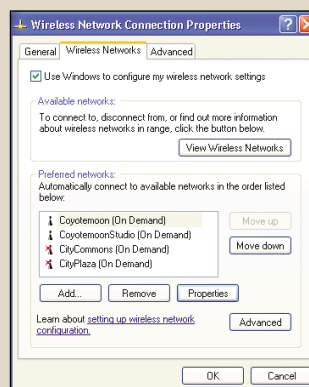
Intermittent or slow connections can be the result of interference from other electrical devices. Most wireless network connections operate in the 2.4GHz band, as do many cordless phones,

microwaves, and other electronics. If you're experiencing problems with your home network, try changing the wireless channel your access point is configured to use. If you're having problems with your work network, consult your IT group for assistance.

Weak signal strength can also slow or prevent connections. The obvious solution is to move closer to the access point. When this isn't possible, you can increase the effective signal strength by using external range-boosting antennas. These antennae are available from a variety of wireless manufacturers and are an essential part of a mobile toolkit if your job depends on staying connected.

Connecting To A Specific Network

WinXP maintains a list of preferred networks. Whenever you connect to a new network, it will be added to this list. This can cause



Wireless networks that you add to Windows XP show up in the Preferred Networks list. Each preferred network has its own set of connection properties, so you can easily create connection profiles for every wireless network you access.

problems when multiple networks on the list are available at the same time.

You can control the order of preference and whether or not WinXP automatically connects to a particular network. Right-click My Network Places and select Properties from the pop-up menu. Right-click the Wireless Network Connection icon and select Properties from the pop-up menu. Select the Wireless Networks tab. Under the Preferred Networks heading, you will see a list of every wireless network you have ever connected to. Most will have the word (Automatic) appended to their name. This means that if they are within range, WinXP will automatically attempt to connect to them.

To change the order of preference, click a wireless network name to select it and use the Move Up or Move Down button to change its location on the list.

To prevent WinXP from trying to connect to every available network, change the tags from Automatic to On Demand. Select a wireless network and click the Properties button. Select the Connection tab, remove the check mark next to Connect When This Network Is In Range, and click OK.

Be Prepared

With a little planning and these basic tips, you can avoid, or at least work your way out of, the most common connectivity problems. ■

by Tom Nelson and
Mary O'Connor

Lost Wallet Or Purse



Losing a purse or wallet is a frustrating experience, and if your pocket is picked while you're on a business trip many miles away from home, the distance only seems to accentuate that frustration. Whether it is pictures of family and friends or business cards of colleagues, you probably carry tidbits of your life in your wallet or pocketbook. Although losing these things may seem bad enough, you still have to worry about your personal financial information, as well. Driver's licenses; credit, debit, and ATM cards; and social security cards can give thieves hints to accessing the nest egg, not to mention the financial identity, you've spent most of your adult life building.

We're going to take a look at what you can do to stay safe if your purse or wallet is ever lost or stolen. Here are a few tips for replacing critical items, as well as a few tips on damage control and how to minimize the negative effects of losing personal documents.

Cell Phones

A cell phone that ends up in the wrong hands can end

up costing you some serious cash. Not only could you be held responsible for paying for the calls someone else makes on your phone, but you also are out an expensive handset in addition to all the numbers you store in your phone's phonebook.

We often underestimate the importance of our cell phones until we no longer have them. If you lose your cell phone, you need to inform your cell phone service provider. Karen Smith, PR Manager for Verizon Wireless, says, "Immediately call and suspend your service as you are liable for calls made up until we hear from you."

In the chance that someone would steal your phone or it becomes lost while you are on your trip, there are a few things you can do before you leave to ensure your contacts aren't lost down the road. If you are a frequent traveler, check with your provider about buying insurance for your cell phone. Generally, your provider can tack this insurance onto your monthly bill. Rates for insuring your phone will vary by phone, but you can plan to pay an extra \$3 to \$5 per month with a \$35 to \$50 deductible. Sprint, for instance, has a plan that will replace the lost phone with a new, warranty-included handset, for \$5 per month.

Also, many cell phone providers offer a service that lets you back up your contacts list. For instance,

Verizon offers the Backup Assistant, a feature of its Get It Now application that costs \$1.99 per month. Smith explains, "Backup Assistant creates a copy of your cell phone's contacts list on a secure, password-protected Web site." This way if you lose your phone, you won't lose all of your contacts' phone numbers.

Credit/Debit Cards

Credit card theft is one of the biggest worries among travelers who lose their purses or wallets. If you misplace either of the items, or if someone steals them, you not only have to worry about someone potentially charging thousands of dollars to your card, but you also may worry about identity theft.

However, contrary to popular belief, a thief cannot steal your identity if the only thing he has is your credit card. Jessica Antle, a spokesperson for MasterCard, says, "You cannot have your identity stolen if someone steals your credit card. . . . You need to have other information like a date of birth, social security number, or mailing address."

The good news is that if you lose your credit card, you don't necessarily have to worry about someone stealing your identity and

opening new accounts or taking out large cash advances. Contact the company that issued you the credit card to cancel your card and request the company issue you a new card. The bad news, however, is if you keep your credit card in your wallet and your wallet is stolen, the thief who made off with your wallet will also have access to other personal information, such as your date of birth and address that appear on your driver's license.

If you suspect you're a victim of identity theft, follow the advice on the FTC's ID Theft Web page (www.consumer.gov/idtheft) and begin recovering by contacting the fraud departments of any one of the three major credit bureaus to place a fraud alert on your credit file. Next, you will



The U.S. Department of State's travel Web site should be the centerpiece of your international travel planning.

want to close any accounts you fear the thief might tamper with using information he obtained from items in your wallet or purse. You should also contact your local police and file a report of

theft and send a copy of the report to your creditors. In addition to all these other things, you will want to file a complaint with the FTC. Upon your return home, obtain a credit report to make sure no new or unusual charges appear on your existing accounts and that there are no new accounts that show up without your knowledge.

Check with the company that issues your credit card to learn its policy on fraudulent purchases someone makes using your card. Most credit card companies have implemented policies absolving you of the obligation of paying for purchases that you didn't make.

Driver's License

One thing just about all of us carry with us in wallets or pocketbooks is our driver's licenses. This little laminated card is a license to freedom, but without it anyone can feel restricted and helpless.

What can you do if you someone swipes your ticket to drive? Most states offer you the ability to get a replacement fairly easily. For example, Georgia (www.georgia.gov) offers temporary licenses for those citizens who are out of state. Connecticut is similar in that it offers replacement licenses to drivers who have misplaced their drivers' licenses and who are temporarily away from their home state. A downside to this, though, is the process involves waiting for the state DMV (Department Of Motor Vehicles) to mail out a new license, which could leave you sitting on your thumbs for the better

part of a week-long business trip. As you prepare for your trip, you may want to check out your state's replacement license policy and jot down the phone number of your local DMV.

Social Security Card

We strongly recommend memorizing your social security number and storing the original card someplace safe. However, if someone does get a hold of your card, there are options for replacing the card. According to the Social Security Online Web site (www.socialsecurity.gov), to apply for a replacement card you need to fill out Form SS-5. You also need to provide proof of your identity. Documents you can use to prove this include your driver's license, marriage or divorce records, life insurance policy, or passport. Although this will get you a new card, you won't get a new social security

number. Social Security doesn't take special action to monitor accounts of the people who have recently replaced a card. If you fear someone might be stealing your identity, you should file a report, online or by phone, with the Federal Trade Commission (www.ftc.gov) immediately.

Traveling Abroad

If you're planning to travel anywhere outside of the United States, there is some key information you should obtain before leaving. Track down the phone number of the closest U.S. Embassy to where you're staying, and then jot it down in a few different places. You may want to write that number down on a few slips of paper, as well, and put them in the pockets of your suit jackets so you always have the number on you. If you lose your wallet or purse, or if you happen to get robbed while you are on a

trip, the embassy is the first place you should contact, even before the local police. The embassy can help you get the information you need to replace your lost identification, as well as assist you in filing a police report with the local authorities. If you lose your passport, the embassy also can provide you with the proper forms and paperwork to get you back home. Visit the U.S. Department of State's Web site (www.travel.state.gov) and you can register your trip and find contact information for the embassy in your country.

Make The Best Of It

Losing your wallet or purse while on the road is a stressful situation to say the least. However, if you follow this simple guide, you may be able to save some time and frustration and make the best out of a rotten situation. 

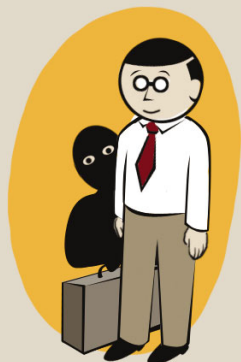
by Sam Evans

When In Roam

It's always important to have a contingency plan when traveling. Here's a list of phone numbers that could prove useful in case a mishap occurs while you're on the road.

Organization	Phone Number	Web Site
AAA	(800) 922-8228	www.csaa.com
American Express	(800) 528-4800	www.americanexpress.com
Bureau of Consular Affairs/ U.S. Department of State	(202) 955-0430	www.travel.state.gov
Discover	(800) 347-2683	www.discovercard.com
Equifax Credit Bureau	(888) 766-0008	www.equifax.com
Experian Credit Bureau	(888) 397-3742	www.experian.com
Federal Trade Commission	(877) 438-4338	www.ftc.gov
MasterCard	(800) 622-7747	www.mastercard.com
Social Security Administration	(800) 772-1213	www.socialsecurity.gov
TransUnion Credit Bureau	(800) 680-7289	www.transunion.com
Visa	(800) 847-2911	www.visa.com

Identity Theft



I dentity theft wreaks havoc in people's lives everyday. In some of the worst cases, victims have been refused loans, lost their jobs, or been arrested for crimes they didn't commit. Innocent people of all ages are becoming victims of this horrible crime on a daily basis.

According to the FTC (Federal Trade Commission), "Identity theft occurs when someone possesses or uses your name, address, Social Security number, bank or credit card account number, or other identifying information without your knowledge with the intent to commit fraud or other crimes." Fortunately, there are things you can do that will make you a less attractive target.

Knowledge Is Power

The earlier you discover you're a victim of identity theft, the greater chance you have for lessening the extent of the damages. Look for warning signs that indicate someone may have stolen your identity.

Inaccurate Credit Report

New accounts opened by a thief are likely to show up on

your credit report. Review your credit report for accuracy at least once a year. You're entitled to a free credit report from each of the three major credit bureaus (Equifax, Experian, and TransUnion) once a year through AnnualCreditReport (www.annualcreditreport.com). Availability of these reports varies by region, but all U.S. states and territories will have the ability to request reports by Sept. 1, 2005.

Missing Bills

Keep track of when your bills should arrive; a missing bill can be a sign that a thief has changed the billing address to cover his tracks. Before paying a bill, examine it to make sure all charges are accurate and report unauthorized charges immediately.

Strange Phone Calls

If you receive calls from collection agencies regarding debt you did not incur, remain calm and find out more information about the charge. Document the call and check into the charges immediately. Don't give the caller your bank or credit card information to pay the bill, as this could cause additional problems if the caller is not legit.

Credit Signs

Receiving credit cards that you didn't apply for, denial of credit, or less-favorable credit terms for no apparent reason can also signal identity theft. Check your credit reports to discover the extent of the theft.

Protect Yourself

The best way to deal with identity theft is to avoid it altogether. Since some things are out of our control (such as information contained in public records), it's impossible to prevent all instances in which our personal information can be stolen; but you can make it more difficult for someone to steal your identity.

A Valuable Number

Your Social Security number is a key that can unlock many doors for thieves. Make sure you protect it whenever possible. Don't keep your Social Security card in your wallet and make sure your number does not appear on insurance cards or other information you carry.

Beware Of Phishing Attacks

Phishing scams occur when a con artist impersonates a bank, credit card, or e-commerce company and sends you an email asking you to give them your personal information. Although these emails may appear to be real, they aren't.

Shred Or Destroy

It's wise to shred paperwork that contains personal information before throwing it away, especially preapproved credit card offers.

Opt Out

To limit the disclosure of your personal information, contact your banks, mortgage

brokers, and the three major credit bureaus to tell them you want to opt out of programs that share personal information. The Direct Marketing Association's Mail Preference Service lets you register to receive less commercial advertising mail.

Be Nosy

If someone asks for your personal information, find out what it will be used for and why he needs the information. Be extra cautious when giving out information over the phone if you did not initiate the conversation. Don't be afraid to hang up the phone and call back at a phone number corresponding to your bill to verify the caller's legitimacy.

When It's Too Late . . .

If you're already a victim of identity theft, take immediate steps to correct your records. Make sure to document every telephone call and follow up in writing using certified mail, return receipt requested. Never send original documents, and always keep a copy of letters refuting charges.

Tell Credit Agencies

Contact any one of the three major credit-reporting agencies mentioned above to report fraud. They will place a fraud alert on your credit report and notify the other two agencies. This alert will tell creditors that they must contact you before authorizing any changes to your

accounts or opening new accounts. You'll also receive all three credit reports at no charge. Check your credit report every three months in the first year of the theft and once a year thereafter.

Close Accounts

To minimize financial damage, close all accounts the thief has tampered with or fraudulently opened, including bank and credit card accounts. Place passwords on any new accounts you open, but don't use easily identifiable words or numbers.

File A Police Report

Many organizations require proof that you are a victim of identity theft in the form of a police report. If you know where the fraudulent actions occurred, contact the authorities in that community; otherwise, contact your local authorities.

File A Report With The FTC

Filing a report with the FTC helps with fraud investigation and can help with investigations across multiple jurisdictions. The information can help policy-makers and businesses create better remedies and prevent identity theft. An ID Theft Affidavit from the FTC may also help in disputing charges.

Protect, Prevent, Patch

The best way to deal with identity theft is to protect your information and prevent victimization. If you are a victim, make sure to patch things up on your credit report as soon as possible. ■

by Jennifer Johnson

Important Contact Information

Becoming a victim of identity theft is traumatic. If you find yourself in this position, here are some Web sites and phone numbers that may help.

Get Credit Reports

AnnualCreditReport
www.annualcreditreport.com
(877) 322-8228
Free credit reports.

Equifax
www.equifax.com
Order report: (800) 685-1111
Fraud alert: (888) 766-0008
Credit reporting agency.

Experian
www.experian.com
(888) 397-3742
Credit reporting agency.

TransUnion
www.transunion.com
Order report: (800) 888-4213
Fraud alert: (800) 680-7289
Credit reporting agency.

Opt Out

Direct Marketing Association Consumer Assistance
www.dmaconsumers.org
/cgi/offmailinglistdave
Indicate mail preferences.

Opt-Out Prescreen
www.optoutprescreen.com
(888) 567-8688
Opt out of preapproved credit or insurance offers.

Investigate

Certegy
www.certegy.com
/ContactUs.html#USCONSUMER
(800) 437-5120
Determine if anyone is writing fraudulent checks on your account.

Chex Systems
www.consumerdebit.com
/consumerinfo/us/en
/consumerreports/index.htm
(800) 428-9623
Obtain a consumer report about checking accounts in your name.

Internal Revenue Service

www.irs.gov/compliance/enforcement/article/0,,id=106778,00.html
Criminal Investigation Informant
Hotline: (800) 829-0433
Find out if someone has filed a tax return in your name.

TeleCheck
www.telecheck.com
(800) 710-9898
On the Web site, click Consumer and Check Fraud/Forgery to find out if anyone has used your driver's license or ID to write fraudulent checks.

Report Other Problems

SCAN
(800) 262-7771
Call this hotline to find out if an identity thief has been writing bad checks in your name.

Social Security Administration Office of the Inspector General
www.ssa.gov/oig/guidelin.htm
(800) 269-0271
Report fraudulent use of your Social Security card to obtain benefits.

U.S. Postal Inspection Service
www.usps.com/websites/department/inspect/fraud/welcome.htm
To report stolen mail or a fraudulent address change, look in your local phone book for the nearest Postal Inspector or go to this Web site.

Report Credit Card Fraud

American Express
https://www124.americanexpress.com/cards/home
Card replacement: (800) 992-3404
Customer service: (336) 393-1111
On the Web site click Customer Service to find links to initiate a report.

Bank of America
www.bankofamerica.com
(800) 848-6090

BankOne/Chase

www.bankone.com
Credit Card Services Fraud Operations: (800) 686-5657
On the Web site, click Protect Your Family From Identity Theft.

Citibank

www.citicorp.com/domain/contact
(800) 627-3999

Discover Card

www.discovercard.com/discover/data/faq/about_your_account.shtml#loststolen
(800) DISCOVER (347-2683)

MasterCard

www.mastercard.com/cgi-bin/emergserv.cgi
(800) MC-ASSIST (622-7747)
Report lost or stolen credit card: (636) 722-7111

Visa

www.usa.visa.com/personal/security/need_help_now.html
(800) 847-2911
(410) 581-9994

Wachovia

www.wachovia.com/helpcenter/page/0,,2372_7010,00.html
(800) 477-9131

Wells Fargo Bank

www.wellsfargo.com/help/index.jhtml
(866) 867-5568

Additional Resources

Call For Action

www.callforaction.org

Federal Trade Commission

ID Theft

www.consumer.gov/idtheft
(877) IDTHEFT (438-4338)

Identity Theft Resource Center

www.idtheftcenter.org

Privacy Rights Clearinghouse

www.privacyrights.org

Can't Open A PDF File



Adobe Reader, free software that lets you open and print PDF files, comes preinstalled on many new PCs. More than 500 million copies of Adobe Reader have been distributed since the program's initial launch in 1993. But despite this, it's possible, but not likely, that one would have a PDF file, but no way of viewing it. If for some reason you find yourself in this predicament, there are a few options for installing Adobe Reader on your PC.

Install Adobe Reader

If you have an Internet connection, downloading Adobe Reader is the easiest way to get that PDF file on your screen. You can download the latest version of Adobe Reader by visiting www.adobe.com/products/acrobat/readstep2.html.

For Step 1 in the download process, choose your Language, Platform, and Connection speed. Next, choose the appropriate options in Step 2, and then click Continue. On the next page, click Download to begin the

installation. Follow the on-screen instructions to finish the installation.

Downloading Reader directly from Adobe ensures that you will obtain the latest patches and updates with the product. As with any download, it is a good idea to make sure an antivirus checker is installed and running to prevent the accidental download of malware, such as viruses and worms. To check this, browse the Start menu for an installed antivirus program, such as Symantec's Norton AntiVirus or McAfee's VirusScan. Make sure it is running and has the latest virus definitions loaded before downloading any files.

If you don't have an Internet connection, check an installation CD for just about any major software title. Many software publishers include a version of Adobe Reader on installation CDs for purposes of viewing that software's documentation.

Work Around Installation Challenges

Because many IT departments block software installation on company computers, it may be a challenge to load Adobe Reader. The reason most software cannot be installed is likely because the IT department has set a group policy to block it. When this is the case, the best (and safest) option is to contact a system administrator. This professional can talk you through a

number of methods for allowing this installation.

Many IT departments have a VPN (Virtual Private Network) or other external networking utility that allows you to connect to the office's network if you have an Internet connection. Once connected to the network, the administrator can modify the group policies to allow software installations.

You can also attempt to disable the program or service that prevents installations on your own. Before doing this, however, be sure to talk to your IT department. Disabling services running on your notebook can cause problems, and your organization's data security could be compromised. Programs and services can be disabled in the Processes tab of the Task Manager window that appears when you press the

CTRL-ALT-DELETE combination or by entering the Services module under Administrative Options in the Control Panel. In either case, scroll to the program or service that needs to be disabled, click it, and then click either End Process or Stop Service.

Plan Ahead

Accessing that PDF file immediately can be vital. Have a copy of Adobe Acrobat or Adobe Reader installed and loaded with the latest patches and updates before going on the road. Also, get a phone number for an IT administrator whom you can contact if you have trouble. Finally, bring portable media such as blank CDs and flash drives; they can be a lifesaver when trying to transfer information between notebooks. ■

by Brian Weed

Step 1 of 2

Choose your language, platform, and connection speed. Your selection will determine the version of software that you will download.

Language

English

Platform

Windows XP

Connection speed

broadband

Step 2 of 2

Total download file size: 26.8MB
Adobe Reader version: Adobe Reader 7.0

☒ Download the full version of Adobe Reader (recommended), allowing me to:

- Markup, search, and save Adobe PDF files*
- Play back embedded movies, animation and sound
- Activate accessibility features built into PDF files
- View Adobe Photoshop® Album slide shows and electronic cards
- Read and organize digital editions (formerly eBooks)

* These features can be activated by PDF authors using Adobe Acrobat 7.0 Pro or Adobe LiveCycle™ software to create PDF files.

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- One click access to your favorite Yahoo! sites such as News, Finance, Sports, Mail.
- Search anywhere online

☒ Also download free Photoshop Album 2.0 Starter Edition software, allowing me to download, find, fix, and share my digital photos—and even create Adobe PDF slide shows that can be viewed with Adobe Reader. [System Requirements](#). This will add 6.5MB to your download.

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Downloading Adobe Reader is a simple two-step process.



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Plasma Series



Can't Open A PowerPoint File



You know the situation. A colleague or client just sent you a PowerPoint file that you urgently need to view, but attempts to access it return the message "Windows Cannot Open This File." This means that your notebook doesn't have PowerPoint. You could spend a lot to buy PowerPoint 2003, but you know there must be another way.

Another Way

PowerPoint Viewer 2003 is a free utility available for download from Microsoft that lets you open and view files created with PowerPoint 97/2000/2002/2003. It won't let you edit PowerPoint documents; it will let you view and print them. PowerPoint Viewer also lets you view password protected presentations. On the downside, it doesn't support certain picture bullets, automatic numbering, animated GIF pictures, ActiveX controls, and other select PowerPoint elements.

Forbidden Files

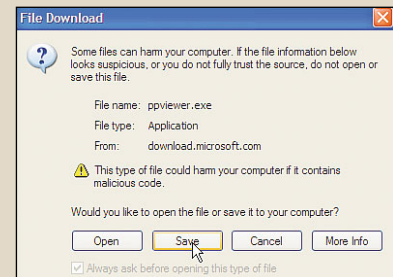
Some IT departments frown on the activity of downloading and installing

anything on the company's hardware to prevent unintended data leakage or the accidental downloading of viruses. Some even go so far as to make downloading and installing anything extremely difficult. Even the most expensive enterprise-level antivirus app can't protect your computer from every threat, so it's a good idea to respect these limitations.

If your company has a more lenient policy, visit www.microsoft.com/downloads/details.aspx?FamilyId=428D5727-43AB-4F24-90B7-A94784AF71A4&displaylang=en to download the PowerPoint Viewer executable. Click the Download button on the right side of the page, click Save in the File Download dialog box,

your virus definitions are up-to-date.

To scan a file using Symantec's Norton AntiVirus, right-click the icon in the system tray and then click Open Norton AntiVirus. Click Scan For Viruses from the menu items on the left side of the dialog box. Under the list of Tasks, double-click Scan Files and then navigate to the Ppviewer.exe file, click it, and then click Open. Norton will scan the file and report if any threats were found. Other antivirus applications will have different procedures for scanning individual files or performing full system scans. Check the documentation that came with your application for scanning instructions.



When downloading PowerPoint Viewer 2003, click Save and then choose a location for the Ppviewer.exe file.



The icon on the left is what PowerPoint files look like on a computer with PowerPoint, while the icon on the right designates files on a computer with only the PowerPoint Viewer.

and then choose a location for the Ppviewer.exe file, such as the Desktop. The 1.86MB file takes five to six minutes to download using a 56Kbps modem, or less than a minute with a broadband connection.

Regardless of your computer's security settings, make sure your antivirus software scans any file you download from the Internet. If your antivirus software doesn't do this automatically or if you're not sure, scan the file manually. Also make sure

and then click Microsoft Office PowerPoint Viewer 2003. The first time you launch the program, click Accept to agree to the PowerPoint Viewer's license terms. Locate the PowerPoint presentation you'd like to view and double-click it to open it.

You'll see the presentation in slideshow view. You can navigate the presentation using the arrow keys, the Enter key, or by right-clicking on any slide and choosing an option from the context menu. Right-click a slide and then click Help to view a list of navigation and printing key strokes.

Return To Sender

PowerPoint Viewer helps users without PowerPoint look at presentations, but if you frequently (or even occasionally) send out presentations, you should include the link to Microsoft's PowerPoint Viewer download site. This will save some time for users who may not have PowerPoint installed. ■

by Andrew Leibman

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Notebook-Projector Setup Problems



One of the on-the-road presenter's most vital tools is a properly working notebook and projector setup, which is second only to a thorough knowledge of the presentation subject. Before you find yourself facing an agitated audience, we'll help you bypass several common pitfalls before they blow your presentation.

Make Connections

First, with both powered down, connect the projector's supplied VGA (Video Graphics Array), DVI (Digital Visual Interface), or S-Video (Super Video) cable to the notebook's external monitor VGA, DVI, or S-Video port. If your projector has a different interface than that of your notebook, you may need a conversion device such as a DVI-to-VGA cable or adapter. Next, connect the power cord for the projector to a nearby outlet. Also, connect the notebook's auxiliary power cord to an outlet, in case your presentation lasts

longer than the life of your notebook's battery.

Some projectors also have a USB cable for a remote that lets you advance slides and move the cursor without keeping you hunched over your notebook. If your projector has a USB cable, plug it into an available USB port on your notebook, preferably the one designated for an external mouse.

Audio is another connection you'll need to consider. Some projectors have built-in speakers that can outperform the built-in speakers of your notebook. Make sure your notebook's headphone or line-out jack is connected to the projector's audio-in or line-in jack. The room in which you're presenting may also have a sound system that features a similar audio-in jack. If your notebook features both line-out and headphone jacks, use the line-out jack. Turn down the volume on your notebook, as sound-enabled projectors and auditorium sound systems typically have dedicated volume controls.

Next, turn the projector on and boot up your notebook.

Show Stoppers

Some projector and notebook setup problems have universal solutions. For instance, to keep your screen saver from turning on during your presentation, disable it from the Control Panel's Display Properties dialog box.

Other problems require a working knowledge of your particular notebook's function keys and the projector's settings and menus. Check the device manual or the manufacturer's Web site for more information on the particulars of your hardware.

No Image

If the image on your notebook doesn't display on the projected surface, you should check to make sure that your notebook has enabled the external video port. Although some notebooks can detect the projector and automatically enable the video output, this is not always the case. To enable your notebook's external video output, consult your notebook's manual.

For some notebooks you can enable the external video output with a key combination, such as CTRL-ALT-F10, but for others you'll need to use specialized function keys, or internal settings. Often, pressing the video-switching key combination toggles the different display devices off and on. Pressing the key combination once may switch the notebook monitor off but turn the projector display on. Pressing it again will turn off the projected display but resume the monitor display. Pressing the key combination a third time enables both, which is called simulscan.

If your projector isn't displaying an image, look for a

source or input button or menu option that will let you select the source designated for video from a notebook or computer.

Out Of Range

If your projector displays "signal out of range" or a similar error, or appears distorted, you may need to adjust your Display Properties. Some projectors can synchronize with the video source, but if your projector doesn't have this capability, you'll need to adjust the settings manually.

Windows XP users should click Start, Control Panel and then double-click Display. (If you're viewing the Control Panel in Category View, click Appearance And Themes and then click Change The Screen Resolution.) On the Settings tab, click Advanced. If you're using a notebook with Windows 2000, click Start, Settings, Control Panel and then double-click Display; click the Settings tab and then click Advanced.

Although the Advanced settings dialog box varies in appearance depending on your notebook's video hardware, you should see a Monitor tab; click it to continue. In the Monitor Settings box, set the Screen Refresh Rate to 70 Hertz and click Apply. If this doesn't fix the displayed image, continue trying successively lower refresh rates until the projected image looks right.

Poor Resolution

If the projected image is cropped on the edges, then you need to synchronize the notebook's resolution with the projector's native resolution. Projectors, like monitors and notebook displays, have a peak resolution at which images are best displayed. Any image above the native resolution will appear cropped, fuzzy, or not at all. If you know your projector's native resolution, it's best to adjust your notebook to the same resolution.

Win2000/XP users can change the resolution from the Display Properties dialog box. Click the Settings tab and then adjust the Screen Resolution slider to the desired resolution. Click Apply and then click Yes if everything looks good.

If you don't know the native resolution of your projector, adjust your notebook's resolution to 800 x 600 and then click Apply. If the projected image is framed with black borders, then adjust the notebook's resolution to 1,024 x 768 and click Apply. If the image looks compressed or unreadable in any way after clicking Apply, click No and try a different resolution. Continue trying different resolutions until you find the one that makes the projected image look the best.

Image Too Dim

Sometimes the projected image may appear too dim. This problem is particularly common with projectors with low lumens (or brightness) ratings. You may also encounter a dim projection if

there is too much light in the room, either from overhead lights or from windows. Try moving the unit closer to the projection surface. This will shrink the overall size of the projection but improve brightness. Reducing the amount of excess light will also improve the projection's apparent brightness.

Image Too Small

If the projected image is too small, and ambient light is not an issue, try moving the projector farther away from the projection surface. Many projectors also have a zoom lens that can enlarge the projection without physically having to move the device.

Image Tapers At Top Or Bottom

This trapezoidal effect usually occurs if the projector is aimed toward the projection surface at an angle. Most projectors have a setting for adjusting this effect, called keystone distortion. If your projector is pointing up at an angle toward the projection surface, adjust the image's keystone setting to taper the top of the image. Alternately, adjust the keystone to taper the



This projector has several buttons and an LCD for making adjustments and changing settings.

bottom of the image if your projector is pointing down at an angle toward the projection surface.

Out-Of-Focus Image

Most projectors have a manual focus ring around the lens that lets you make subtle adjustments. Also, check the projector's control pad, menu, or remote for focus-adjusting controls. If you're using JPEG pictures, or other compressed image files in your presentation, these photos may appear blurry when projected. This is because the photos are low resolution. Try using higher-resolution photos.

Skewed Image

If the projected image is skewed, make sure the projector is perpendicular to the

projection screen. Also make sure the projector is on a level surface.

Backward Image

If the projected image appears backward, then the projector is in rear-projection mode, which means that it is configured to project images from behind a transparent screen. Check the projector's menu or control panel for a front projection mode setting. Alternately, if you're projecting from behind a transparent screen, you need to set the projector to rear-projection mode.

Image Is Upside Down

If the projected image is upside down when using the projector upright, then your projector is configured to display from a ceiling-mounted position. If the upside-down image is coming from a projector that is mounted to the ceiling, then it is configured to project an image in front-projection mode. Navigate the projector's menu or control panel to set the projector to the proper mode, depending on its orientation. ■



This projector features inputs for DVI (Digital Visual Interface), S-Video (Super-Video), and audio.

by Andrew Leibman

Mishandled Luggage



Several months ago I arrived in Las Vegas on a business trip and waited for my suitcase at the Southwest Airlines terminal only to see that it was torn to shreds. I went immediately to the airline's airport office, and cheerfully I was told, "This isn't a problem!" My suitcase was torn so badly that the staff member said it likely had been dragged by a baggage cart and started on fire. I thought, "How does this happen?"

Unfortunately airlines can't guarantee that your baggage and all of its contents will come off the plane in the same condition as when you handed them to the baggage clerk before your flight. Read on to see how the major airlines handle damaged baggage claims and what you should do if something like this happens to you.

Prepare When You Pack

Although you shouldn't have to worry about your baggage arriving at your destination intact, accidents do happen. So educate yourself about your airline's liability policy (available on airlines'

Web sites) and keep it in mind while you are packing.

Most airlines state clear guidelines for liability in their corporate policies. For example, Northwest Airlines' Web site (www.nwa.com) states that it is not liable for damage to luggage handles, over-packed luggage, or protruding parts of checked luggage, such as broken wheels or feet. A reasonable amount of wear and tear will occur when you travel, and it is not a realistic expectation for you to receive a new suitcase if one wheel gets bumped and falls off en route.

Airlines also recommend and prefer that you take valuable or breakable items with you in a carry-on bag instead of storing those items in your checked luggage. Northwest lists numerous items in its liability policy for which it assumes no responsibility if they are broken or lost, including antiques, jewelry, keys, and computer equipment, so plan to take these items with you on the plane to ensure nothing happens to them during the flight.

Take Immediate Action

If you arrive at the airport and discover that your bag and/or its contents have been damaged, address the problem right away. Airlines won't take responsibility for your misfortune if you have already flown home

using your damaged bag a week or more after you discovered the problem.

Take your mishandled luggage and damaged contents to the airline's office at the airport. The staff needs to visually evaluate the damage and fill out a report to record what damage was done and when it occurred. If you are in a hurry and need to leave the airport right away, call the airline office at your earliest convenience so the staff is aware of your problem and can begin reaching a solution with you.

Reporting policies vary among the airlines. For instance, American Airlines (www.aa.com) says in its Damaged Baggage policy on its Web site that no action will be taken "unless the person entitled to delivery files an initial report with the carrier prior to leaving the arrival airport, or at the latest, within 24 hours from the date of receipt of the baggage." Southwest Airlines' policy says you must make a damaged baggage claim within four hours of the time you reach your destination.

When you make your claim, discuss what the staff can do to compensate you for your losses. Employees are empowered to make appropriate decisions so they can resolve the problem at the airport if possible. Airlines will usually replace a suitcase that is unusable

with a suitcase of similar quality and size, as Southwest Airlines did for me. If your bag is only slightly damaged yet the damage is in excess of reasonable wear and tear, the airline will likely have someone fix the bag at the airline's cost. For example, Delta Airlines (www.delta.com) will fix your bags through a partnership with Rynn's Luggage at Netbags.com, and you can check your bag's current status through Delta's Web site.

Generally, airlines will also pay you for items inside your suitcase that were damaged. The staff can do this quickly if they know the general cost of your ruined items, such as toiletries. If other contents, such as expensive clothing, are ruined, the airline will possibly require you to verify the item's price after you get home by sending a receipt to a customer service representative assigned to your claim, as is the case with Southwest.

Find A Solution

If your baggage is damaged on your flight, remember that the airline wants to satisfy you, its valued customer, and, if possible, resolve the situation on the spot. After all, if they keep you happy, both sides benefit: The airline retains you as a customer, and you don't go home with ruined belongings and a bitter taste in your mouth. ■

by Jennifer Suggitt



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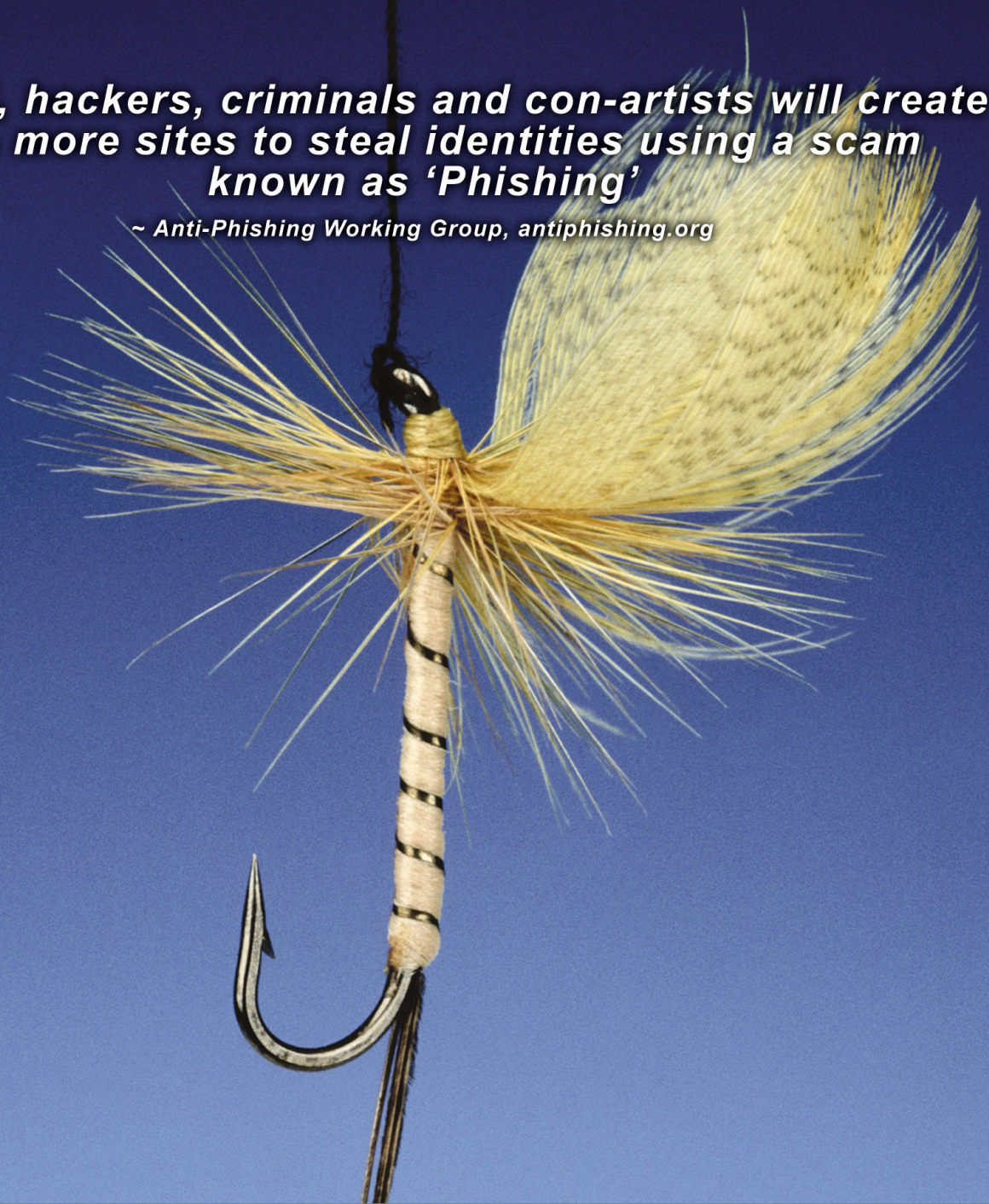
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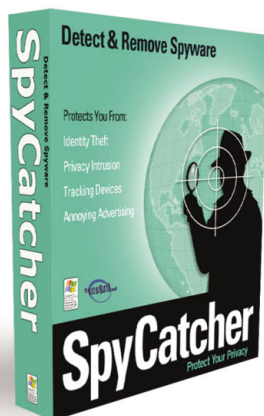
***In 2005, hackers, criminals and con-artists will create
28% more sites to steal identities using a scam
known as 'Phishing'***

~ Anti-Phishing Working Group, antiphishing.org



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Phishing is a type of identity theft that uses legitimate-looking e-mails and Web sites to dupe you into divulging your personal and financial information. **SpyCatcher 3.5** is the most advanced anti-spyware and anti-phishing tool available. Its patent-pending technology warns you when the site you're visiting may not be trustworthy, in addition to protecting you from thousands of types of spyware, adware, trojans and many other threats to your privacy online.

SpyCatcher 3.5 gets you off the hook.

-  Cleans spyware
-  Stops phishing
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-  Prevents spyware from returning

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